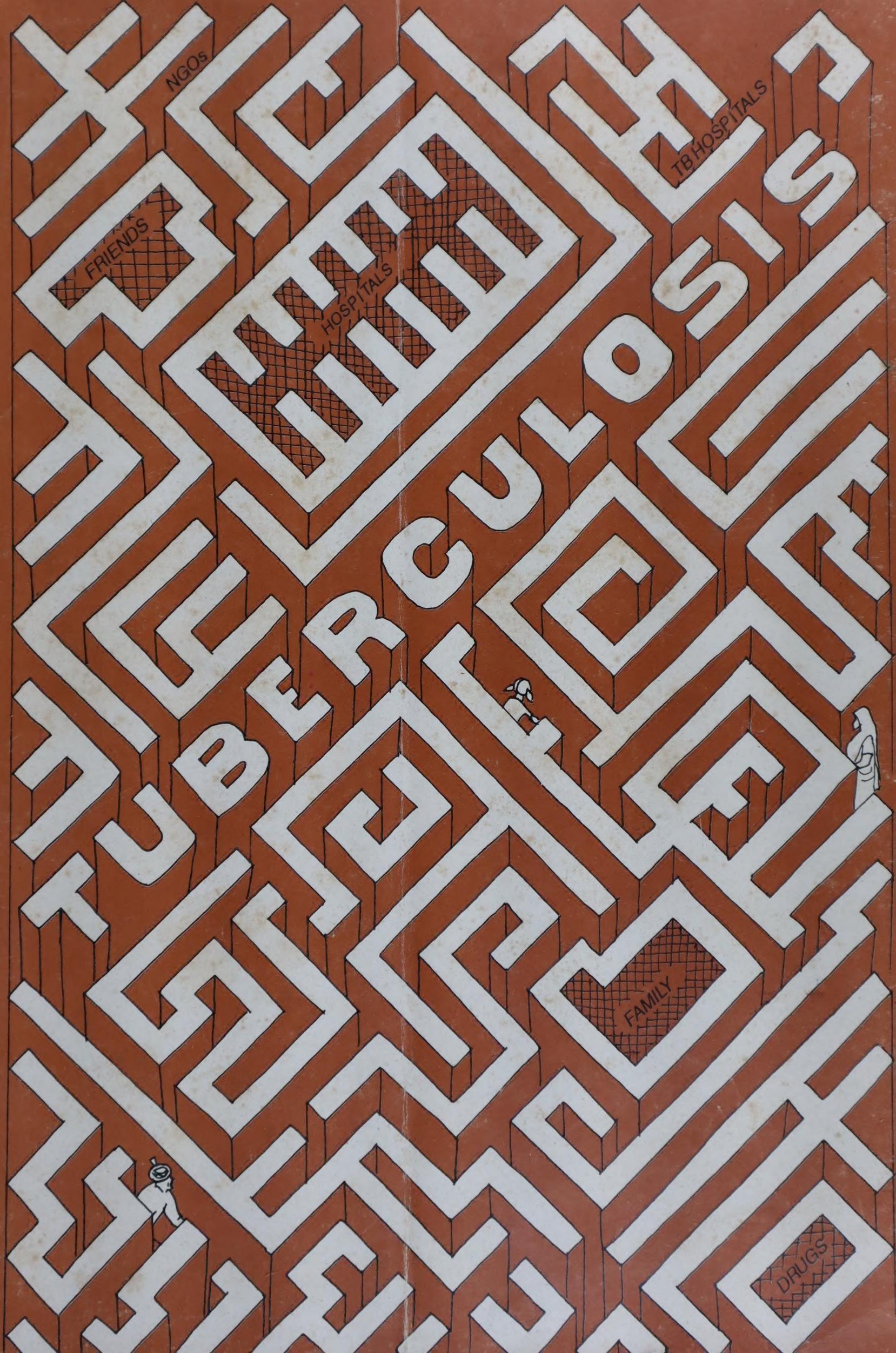


HEALTH

FOR THE MILLIONS

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Editorial

Tuberculosis (TB) continues to be on the prowl, killing 3 million people around the world every year. It accounts for world's foremost cause of death from a single infection. Developing countries have a lion's share, i.e., 95 per cent of TB deaths. Worse still, 80 per cent of the people whom TB strikes are in the most productive years of their life (age 15 to 59). Of these at least 26 per cent are avoidable adult deaths. India has its unenviable share here too. While five lakh people die of TB annually, there are 10 million TB afflictions of which 2.5 million are infectious.

All these factors are responsible for WHO declaring a **global TB emergency** in April 1993. WHO notes with concern the global dimensions of TB when it states, "with fast and accessible travel migration, immigration, infectious disease like TB do not stop at national borders. It is no longer possible to eliminate an infectious disease in one corner of the world and allow it to run rampant in another. In short, it will be impossible to control TB in the industrialised nations unless it is sharply reduced as a health threat in Africa, Asia and Latin America".

As though this was not enough today another problem is looming large : TB/HIV co-infection (co-epidemic). In 1990, it was estimated that only one per cent of all TB cases in Asia were attributable to HIV infection. That proportion may reach 10 percent by the year 2000, observes WHO. "Infact a person with both infections is at least 25 times more likely to become ill with TB, compared to a person infected with TB".

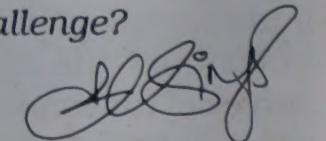
TB is rightly known as a disease of poverty. Socio-economic factors are of crucial significance. The rural and urban poor are mainly the ones afflicted by this disease. The consequences of poverty : crowded living in urban slums, malnutrition, stress, lack of resources, and escapist tendencies like alcholism drug abuse not only aggravates the matters further, provides the ground for its rapid proliferation but also makes them vulnerable to TB infection.

The National TB Control Programme (NTCP), in operation since 1962 had all the right ingredients : community participation, domiciliary treatment approach, simple examination techniques, well laid out strategies of having a National Institute, TB hospitals, district TB Centres (DTCs), Peripheral Health Institution (PHIs) in line with the Primary Health Care. Unfortunately, this programme (NTP) could not deliver goods due to problems like : poor implementation; poor detection, record keeping and follow up; lack of diagnostic facilities : lab technicians, lab and X-rays; Centre-state (50 percent share each) sponsored programme; budgetary cuts — increased allocation to family planning, AIDS at the cost of TB and other National Health Programmes; segregating instead of integrating the various health and development programmes; steep rise in the prices of TB drugs; lack of awareness of the patients and people about drug resistance in case of irregularity; the new drug policy; etc.

The tragedy of TB, is a story of an avoidable and preventable disease, allowed to fester due to neglect at all levels. TB has been thriving in conditions of acute poverty and underdevelopment, in which the majority of our people are compelled to live.

Little tightening up and facing up to the challenge can contain TB — the foremost enemy of Public Health Care. Care has to be taken to ensure : an integrated approach; an increase in the budget; equitable distribution; sustainable development; global prioritisation of TB; strengthening TB and other National Health Programmes; greater involvement of NGOs in preventive, promotive and curative care — depending on their expertise; effective functioning and immediate involvement of Panchayati Raj institutions in health care; etc.

All this calls for immediate action and coordination at all levels. Will we rise to the challenge?



Indu Prakash Singh

The National Tuberculosis Programme and its Implementation

Prof. Debabar Banerji

India can justly be proud of its achievements in developing a public health approach to the problem of tuberculosis in the country. There are three distinguishing features of this achievement: very early in the process, India had moved away from the traditional methods which were being applied in Western countries and developed its own approaches to suit the local conditions; India has made the pioneering effort to develop an interdisciplinary approach to formulate a nationally applicable, socially acceptable and epidemiologically effective National Tuberculosis Programme (NTP) for the country. India's contribution in the form of formulation of the NTP was globally recognised and these have formed the bases of tuberculosis programmes in many of the developing as well as developed countries of the world.

The History

B.K. Sikand of the New Delhi Tuberculosis Centre had pioneered organised domiciliary treatment of tuberculosis cases in the early forties. P.V. Benjamin (an Indian) of the Union Mission Tuberculosis Sanatorium, Madanapalle, had started conducting epidemiological surveys using the obviously rudimentary tool of tuberculin test in the late thirties. When, in the wake of the Bhore Committee recommendations, he became the Advisor in Tuberculosis to the Government of India, he took the initiative, along with C.G. Pandit, to conduct the national sample survey of tuberculosis in 1954-56 which is still considered a classic epidemiological study. This

tradition of epidemiological survey was continued by scholars like Raj Naraian and Frimodt Moller, who have carried out outstanding longitudinal surveys and experimental epidemiological studies, which once again gave India the distinction in offering conclusive evidence to the scientific world that BCG does not provide protection to adults against tuberculosis.

Before the findings concerning BCG, Halfdan Mahler had joined Benjamin in launching the National BCG Campaign in the fifties. India, again, has the distinction of carrying out the path-breaking study to demonstrate that home treatment of tuberculosis patients is as efficacious as sanitorium treatment at the Tuberculosis Chemistry Centre at Madras in the late fifties.

Benjamin and Mahler, again, provided a perspective to the then Prime Minister, Jawaharlal Nehru and the Health Minister Rajkumari Amrit Kaur to set up the National Tuberculosis Institute (NTI) in Bangalore in 1959 with the specific mandate to make tuberculosis services available to the larger masses of the patients who were at that time unable to gain access to the services. Apart from the disciplines such as epidemiology, health administration, clinical medicine, therapeutics, microbiology, public health nursing and X-ray engineering, a still more distinctive feature of NTI was that it also had positions for a social science group to make contributions to the formulation of the National Tuberculosis Programme by giving

Prof. Debabar Banerji is Professor Emeritus in Jawaharlal Nehru University, New Delhi. Prof. Banerji is an eminent Public Health Scientist and author of numerous well-known books. He is known for his life-time contribution to social medicine, particularly in the field of Tuberculosis and Family Planning.

what can be called, a social science dimension to the data obtained by epidemiologists. This was most remarkable. Social science data were used to:

- ◆ demonstrate that a large proportion of the existing tuberculosis patients in the country are actively seeking help from different health institutions all over the country — in other words, they have a "felt-need" for the services,
- ◆ make a critical contribution in evolving a procedure for diagnosing tuberculosis cases in remote rural areas,
- ◆ make it apparent that a tuberculosis programme must be built up as an integral part of the general health services — as it dealt with the problem of suffering of the tuberculosis patients, the programme was designed to sink or sail with the general health services, and
- ◆ demonstrate clearly the enormous epidemiological potential of a "felt-need" oriented tuberculosis programme.

Diagnosing tuberculosis cases in rural health institutions through sputum examination of chronic cough cases, treating the diagnosed cases with chemotherapy by building a sound system of treatment organisation in rural areas, and developing a system to refer the doubtful cases for more refined diagnosis and treatment at the Tuberculosis Centre at the district headquarters (DTC), formed the sheet-anchor of the NTP. The DTC was entrusted with the responsibility of providing training and logistic support to

workers in the health institutions, apart from having a sound information system to keep track of all the tuberculosis cases who are diagnosed and treated in the district, including the two way referral of the cases with the health institutions.

The contours of the NTP were finalised after they were field tested in the entire Anantapur district of Andhra Pradesh. NTI served as the training centre for the staff of the DTC and by 1983-84, the programme had been implemented in 353 districts of the country; in that year 13,08,880 tuberculosis patients were treated under the NTP.

A Cruel Irony

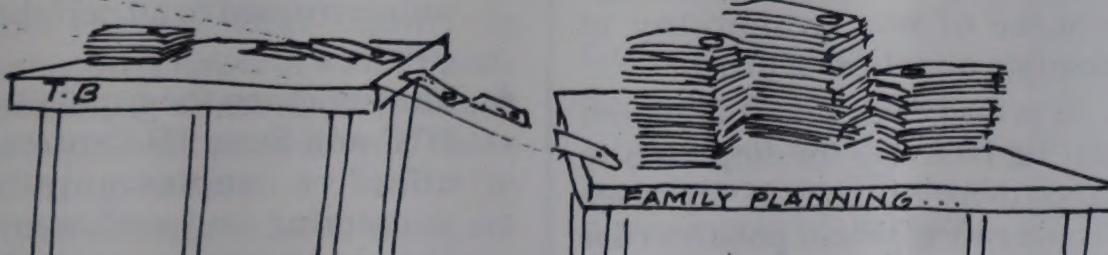
Almost a quarter of a century after the formulation and implementation of NTP, it is apparent that still a very large proportion of the infectious tuberculosis patients, who are literally knocking at the doors of the health institutions of the country, are still being thrown back with bottles of cough mixture. This is a cruel irony. While health workers are ordered by national and international authorities to catch hold of children and immunize them against the six diseases about whose size and extent we know so little, the organisation finds itself helpless in

providing services to the **hundreds of thousands of tuberculosis patients who are literally begging for treatment in various health institutions**. Worse still, of the limited number of tuberculosis patients, who are finally diagnosed in the various health institutions and DTCs, only a small fraction are offered the treatment services as envisaged in the NTP. **The health organisations at the national and state levels should thus be considered as the biggest of the "defaulters"**; they are responsible for death and agonies of hundreds of thousands of the tuberculosis patients of the country. The principal reason for this unforgivable default of the health services of the country is the indifference to the political, bureaucratic and the public health leadership. Over and above, they have been pre-occupied with such massive "vertical" or target-oriented programmes like malaria, family planning and mass immunization.

The consequences of this neglect have been devastating for the sufferers of tuberculosis in this country. When the services they got in different health institutions were found to be grossly inadequate, the patients were forced to fall prey to the exploitation of X-ray centres and bacteriological laboratories, private medical practitioners and the drug

industry. The most heart rending aspect of this dilemma of the tuberculosis patients is that, in spite of their efforts, they finally do not get the needed relief and they continue to suffer till they die of the disease. This dilemma was graphically described in the case study presented in the *FRCH Newsletter* (March-April 1988). Imrana Qadeer, who had worked for over a year in nine villages in Sonepat district of Haryana also got numerous instances of such cases of inadequately treated tuberculosis. Earlier, Klaus van der Veen, working in Valsad district of Gujarat, also provided numerous such instances. One can say on the basis of the data available that the suffering of the tuberculosis patients due to cruel neglect of those who are supposed to implement the NTP has reached epidemic proportions, calling for urgent action. The solutions are very obvious and straightforward.

There is a crying need to improve the quality of public health practice in India. This will ensure strengthening of health services, right down to the level of the health guides. Along with this strengthening of health services, there will be almost automatic strengthening of the NTP, which will ensure that those who are seeking services at various health institutions receive efficacious treatment so that their suffering is alleviated and they do not have to fall a victim to various types of medical exploiters. □



Anti-TB campaign launched

President Shankar Dayal Sharma on Sunday launched the 45th Annual TB Seal Campaign of the Tuberculosis Association of India at a function at the Rashtrapati Bhavan, to coincide with the 125th birth anniversary of Mahatma Gandhi.

Speaking on the occasion, the President underlined the need for greater preventive care, which could be ensured by maintaining cleanliness, as lack of hygiene was a major factor in the spread of communicable diseases like TB and Plague.

Source : The Pioneer, New Delhi, October 3, 1994.

TB Control Programme in India

Dr. K. K. Datta

Dr. K. K. Datta is
Deputy Director
General (TB Control),
Government of India,
New Delhi.

The National TB Control Programme (NTP) has been in operation in India since 1962. India was among the pioneers in discovering and testing the efficacy of ambulatory treatment which obviated the requirement of prolonged hospitalisation in most TB cases. Treatment through prolonged stay in sanatoria of the 40s was replaced by domiciliary management of cases for a period of 18 months or so. This has been replaced by a technical breakthrough in the nature of short course multi-drug therapy consisting of INH, Rifampicin, Pyrazinamide and Ethambutol. The Short Course Chemotherapy was incorporated into the programme in 1982, for a limited number of cases.

Structure of NTP

The organisation structure of the programme consists of :

- ◆ 390 District TB Centres having the composite function of case detection through clinical examination of symptomatics, sputum and X-ray examinations, case management and follow-up, epidemiological services including monitoring, supervision and reporting.
- ◆ 330 TB clinics with diagnostic and case management services, in the urban areas. 47,300 TB beds are also available for treatment of seriously ill TB cases. TB case detection and management services are also available in general health facilities like general hospitals, Medical College hospitals, etc. In India a large number of

medical professionals are working in the private sector (hospitals, clinics etc.) and it is estimated that an almost similar number of TB cases as under the NTP seek treatment in the private sector. However, they are not notified. It is also important to note that the infrastructure for TB was more organised and efficient in terms of domiciliary management in rural areas compared to urban areas. In many municipalities the infrastructure for TB is very inadequate and poor.

In India the population has been growing at the rate of over 2% per annum and the urban population has grown from around 17.97% in 1961 to 25.73% in 1991. The number of new TB cases detected per 1000 population under the NTP has increased from 1.13/1000 in 1981 to 1.80/1000 in 1991. However, the rate of new smear positive TB cases recorded no increase or only a marginal increase was seen. It clearly indicates that the programme did not function as efficiently as expected. It may be stated here that the supervised Short Course Chemotherapy is available in 253 districts. It has a very low coverage because of non availability of adequate quantum of drugs.

It is also clear that though the existing NTP laid an emphasis to detect more number of TB cases but the rate of smear positive case detection is very low (less than 25% of those diagnosed of TB are one smear positive). This is due to continued over reliance on X-ray investigations and patients put on treatment without sputum

examinations being done.

Case holding is very poor, with only about one quarter of the cases notified completing the course of therapy. Therefore, the existing NTP strategy has been revised with the objective of achieving a high cure rate (85%) and treating at least 100 sputum positive patients per 100,000 population, thereby reducing morbidity and mortality and cutting down the transmission. It is expected that about 100 smear positive cases per 100,000 will be detected of which about two thirds will be new and the rest will be relapses, failure etc.

The broad strategy of the revised NTP are:

- ◆ To change the current emphasis from radiological diagnosis to sputum microscopy diagnosis.
- ◆ To treat with SCC, directly supervised in the intensive phase, all sputum positive and seriously ill sputum negative cases, and to involve the peripheral health functionary in supervised treatment administration.
- ◆ To make available all categories of anti-TB drugs in appropriate multi-drug blister packs, uninterrupted to all peripheral points.
- ◆ To strengthen the capability of DTC and State TB Centres for effective implementation, monitoring and evaluation of the programme including cohort analysis.
- ◆ To augment and improve the training capabilities both at the national and state level.
- ◆ Professionally managed IEC

campaign.

♦ Operational Research.

The revised strategy is in line with the recommendations made by WHO. The Government of India is also committed to maintain the strengthened revised NTP as a permanent health system activity integrated into the existing health structure with strong leadership from a central unit. The Government's commitment is evident from enhanced central plan budgetary allocation from 150 million Indian rupees per annum three years ago to 460 million Indian rupees during the current financial year.

Annual Risk of Infection

The intensity of disease transmission in the community is best reflected by the annual risk of infection which represents the probability of a previously uninfected individual becoming infected with TB during a one year period.

The estimated risk of infection ranges from 0.6 to 2.3%. Epidemiological interpretation is difficult because of the variable methods used in various studies. However, there is no evidence of a substantial decrease in the risk of infection (RI) over the last 30 years. The stagnant situation has been further corroborated with two recent studies in the rural areas of South India. One shows that the risk of infection has decreased from 1% in 1961 to 0.61% in 1985. The other did not show any change in the risk of infection between 1969 to 1984 (risk of infection 1.7% in both years). This result is considered consistent with a poorly functioning control programme leading to creation of chronic cases and drug resistance. In fact in clinical practice chronic cases are often seen and resistance in tuberculosis is also becoming a matter of concern. Only a few laboratories are conducting drug sensitivity testing for TB in India. Although data on drug resistance

is scarce and resistance is not systematically monitored, available information is a cause for concern. The very high rate of secondary resistance to both Rifampicin and Isoniazid is particularly very serious, with long term implications as these patients will transmit incurable form of Tuberculosis in the community.

Because most adults were infected in their youth, a small decrease in RI would not have any rapid impact on the prevalence of infection in the adult population. It is safe to estimate that at least 50% of the population above the age of 20 years is infected and will remain at risk of disease and death from tuberculosis for their lifetime. A conservative estimate is that, currently, the RI for India is 1.7 to 2%.

Notifications

Registration under the NTP highlights the problem of increasing over-diagnosis of smear negative and under diagnosis of smear positive cases. During the period from 1980 to 1991, the number of District TB Centres increased from 320 to 387. However the trend reflects an increased proportion of cases not confirmed by smear examination. The proportion of smear positive cases has decreased from 25% in 1980 to about 20% in the late 80s; lapses, failures, partially treated patients are often inappropriately included in these notifications.

Current TB rates

As per NTI estimates of 1974, about 8,70,000 new smear positive TB cases have occurred in 1992. This number is very similar to the 850000 estimated on the basis of incidence rate from the Tuberculosis prevention trial undertaken by TRC

Madras. If the current average annual risk of infection is 1.7%, 1.6 million new TB cases occur annually of which 7,10,000 are smear positive. About 1/3rd of the total Tuberculosis burden is borne by the urban conglomeration.

Age and Sex Distribution

The majority of tuberculosis cases in India occur below the age of 45 years, with about 75% of the diagnosed cases between 15 and 44 years old. Age-specific estimates of incidence during 1974 applied to the 1992 population, suggest that about 58% of all cases today occur between 15 and 44 years old. Two thirds of the cases are estimated to occur among males but tuberculosis takes a proportionally larger toll on young females than among young males. More than 50% of female cases occur before age 34.

Mortality

Total mortality due to TB is uncertain but by any estimate it poses a huge economic burden for India. TB mortality is estimated to be 420000 deaths every year (50/100000 population).

FACT



Covering your mouth while coughing



**Spitting into a container
Disposing sputum properly**

CAN

Help control spread of TB



Cumulative mortality during the decade to the year 2000 will probably exceed 3.5 million deaths, an enormous burden for the society. A large share of these premature deaths can be avoided with a well-functioning programme. Given the ages at which deaths from tuberculosis are now occurring and the low costs for tuberculosis programme inputs in India, it is probable that the discounted cost per healthy year of life gained as a result of a well-functioning tuberculosis control programme will be well under \$ US 10, making tuberculosis control one of the highest priority interventions for the State and Central Governments.

HIV and Tuberculosis

HIV was first reported in India in 1986. There is no significant evidence yet available indicating its likely impact on TB situation in India. As a large proportion of Indian population (50% of the adult population) is already infected with tuberculosis, it is most likely that with the spread of HIV, the epidemiological situation of tuberculosis will deteriorate. Limited data indicate that **sero-positivity for HIV among TB patients is much higher than that of the rest of the general population.** Upto the end of 1993, of the 559 AIDS patients 331 (60%) had evidence of active tuberculosis. As per the National AIDS Control Programme currently there are about 0.75 million persons infected with HIV. Assuming half of these people are infected with tuberculosis and that the break down rate from TB infection to disease among dually infected individual is 10% per year, more than 35000 HIV related TB cases are likely to occur annually.

With the spread of HIV renewed concern for tuberculosis made authorities look into the implementation of the programme critically and the programme was nationally reviewed through a group of national and international

experts. Some of the observations of the review committee were :

- ◆ Inadequate budgetary outlays and shortage of drugs.
- ◆ Undue emphasis on X-ray instead of sputum testing for diagnosis.
- ◆ Poor quality of microscopy.
- ◆ Emphasis on detection of new cases rather than on cure.
- ◆ Poor organisational set-up and support for T.B.
- ◆ Lack of consensus among practitioners regarding treatment regimens.

As a follow up measure the National Technical Management Group was strengthened through induction of senior level experts and a revised strategy was drafted.

Several core-trainers were trained in the implementation of the revised NTP at the national and international level with the support of WHO and a large number of professionals were trained to implement the revised NTP on a pilot basis in five sites, namely, Delhi, Bombay, Calcutta, Bangalore and Gujarat. These pilot projects are being implemented with SIDA support. The results are found to be very encouraging; smear conversion rate after having three months of treatment was around 85%. During the coming one year more pilot sites are being included for the implementation of the revised NTP with World Bank Project Preparation Facility Advance. It has been proposed that during this year one district in each of the five states and one site in each of the 10 metropolitan cities will be covered with the revised National Tuberculosis Control Programme on a pilot basis with World Bank assistance, with a total population around 14 million.

Operational Components of the Revised NTP

Some of the important operational components of the revised NTP will be :

- ◆ To strengthen the sputum

microscopy facilities so that quality sputum microscopy is available as close to the people as possible through training of Laboratory Technicians and expanding the network of laboratory facilities and diagnosing Tuberculosis cases at least on three sputum smear examination instead of only one as it is done now.

- ◆ To involve the most peripheral health functionary in supervised drug administration of anti-TB drugs during the intensive phase.
- ◆ To make available anti-TB drugs uninterrupted to all the peripheral health facilities in multi-drug blister packs.
- ◆ To create supervisory team at the sub-district level (0.5 million population) to improve the quality of supervision, monitoring and evaluation.
- ◆ To decentralise District TB cases registration at the sub-district level.
- ◆ To strengthen the epidemiological capability in cohort analysis etc., through proper training and strengthening of the infrastructure.
- ◆ To augment operational research activities to improve the programme implementation.
- ◆ To augment training facilities both at the National and State level through expansion of the existing infrastructure.
- ◆ To establish professionally designed IEC activities to support the implementation of the programme.

The initial results available from the pilot sites indicate high sputum conversion rate around 85% and it appears that it will be possible to achieve high cure rate through revised strategy. Under the revised strategy it is envisaged that the new sputum positive cases and seriously ill sputum negative cases will be on four anti-TB drugs

namely INH, Rifampicin, Pyrazinamide and Ethambutol for a period of two months and then during the continuation phase of four months they will be given INH and Rifampicin. All the drugs will be administered three days in a week. All cases of sputum positive relapses, failures etc., will be given the above mentioned four anti-TB drugs for a period of three months. In addition injection Streptomycin will also be given. During the continuation phase these patients will receive three anti-TB drugs namely INH, Rifampicin and Ethambutol for a period of five months. All the drugs will be administered three days in a week. Sputum negative, less seriously ill cases will be either given standard conventional chemotherapy for a period of 12 months with INH and Ethambutol or INH and

Thiacetazone or they may also be given if resources are available three anti-TB drugs for a period of two months like INH, Rifampicin and Pyrazinamide. Subsequently they will receive two drugs INH and Rifampicin for a period of four months.

Operational Research

Operational research activities are going to be augmented so that the NTP gets appropriate support for improving the efficiency of the implementation of the programme.

Let me put on record the appreciation of our country for the technical cooperation and guidance of WHO in implementing the revised NTP on a pilot basis as well as the financial support of the Government of Sweden. Several operational studies to assist in the formulation of the revised NTP and

implementing the same are under consideration. Some of the operational studies which are under progress and which are going to be initiated are :

- ◆ Studies on risk of infection in different parts of India.
- ◆ Cohort analysis.
- ◆ Perception and attitude towards tuberculosis for professionals and general population.
- ◆ Revaluation of the reasons and level of delay in the diagnosis of sputum positive pulmonary tuberculosis under programme conditions in South India.
- ◆ Effectiveness of village-based health functionaries in improving treatment adherence of tuberculosis patients.
- ◆ Minimising mis-diagnosis in smear negative Tuberculosis. □

The legendary Old man in the Moon

(Based on elements of Burmese traditions)

Salai Pa Cin

The legendary old man in the moon can no longer concentrate on his job of pounding rice in a mortar with the pestle. He feels uneasy because he senses that something unusual has happened on earth. So he decides to take a journey to earth in order to visit the village where this unusual thing has occurred.

He arrives at the village. The village is peaceful, neat and clean, surrounded with green paddy fields, beautiful gardens, and constantly flowing crystal clear streams. He sees the villagers are healthy, happy and enjoying their lives. They are loving, sharing, and caring for each other and are working together. They wear simple clothes, work hard and their grain bins are always full. It seems to the old man that these villagers have learnt to meet all their needs through their own knowledge and cooperation.

The old man proceeds towards the entrance to the village. There, he sees a man stepping out of the latest modern car. There is a small red cross on the windshield. He carries a black bag. At the same time, a villager is seen coming toward the entrance. The man and the villager meet and greet each other and the old man from the moon hears the following conversation:

Villager: "Can I help you?"

The guest: "Thank you! I would like to ask a question: How many persons died during the last 10 years in this village?"

Villager: "Only one person died."

The guest: (surprise in his voice) Oh, really !

And who was that?"

Villager: "It was the doctor."

The guest: (a puzzled look on his face)

"Why did he die? What was the cause of death?"

Villager: (looking straight into the eyes of the guest)

"He died of starvation."

The old man in the moon smiles, for he now understands the reason for the unusual occurrence. At ease, he returns to his peaceful, shining kingdom in the moon, with much joy and contentment in his heart.

Moral of the Story

This little humorous story communicates much about the idea of self-sufficiency and people's empowerment. When people are in charge of their own destiny, when there is sharing of knowledge, and when they work together to satisfy their needs in a spirit of love and cooperation, there is no need for people from the outside coming to "save" them. The doctor symbolises professional, specialised knowledge; in this village, he is an "anachronism": that is, he no longer "fits into" this new setting. He comes from another time and place, (that of power transformed village. Since he is not needed, he cannot even make a living - hence he "dies of starvation"). When people are truly empowered, no vested interest can "become fat" off them any longer. Empowered communities can "starve" those with vested interest, removing their power base completely. Then they can come with all their modern "trappings" of success and technologies of so called "development", but they impress no one. Dependency is broken, and true liberation from bondage occurs. This is true "Primary Health Care" and this is the unusual occurrence that even the Old Man in the Moon felt. This process of liberation is so powerful and freeing that when it occurs, it effects every corner of the universe. This story contains a meaningful lesson about the difference between medical care and primary health care for those of us planning to work in community-based health and development.

Source: *Manushiyata Newsletter, Jamkhed Institute of Training and Research in Community Health and Population, September-November, 1994, pp. 6-7.*

Tuberculosis: A Snap Shot Picture

Dr. Anil P.

Tuberculosis continues to be a major public health problem in the country.

- ◆ Nearly 40 % of the population is infected with TB germs.
- ◆ About 1.5% of the population is suffering from radiologically active TB disease of the lungs, of which nearly 1/4th, i.e., 0.4 % are sputum positive or infectious and dangerous to the community so far as spreading of the disease is concerned.
- ◆ Every year nearly 2 to 2.5 million new TB cases arise in the population.
- ◆ Mortality rate is 50 per one lakh population annually.

National Tuberculosis Programme

India's National Tuberculosis Programme (NTP) is that organised effort which aims to bring under control the problem of Tuberculosis in the community, through defined objectives, activities and resources. It comprises well known anti-tuberculosis measures knit into a comprehensive, practical, acceptable and economically feasible programme. The programme has been in operation since 1962.

Objectives of the Programme

- ◆ To detect maximum of T.B. patients amongst out patients attending health

institutions with symptoms, or in community by health workers and treat them efficiently, and in doing so, to give priority to sputum positive T.B. patients.

- ◆ To undertake the above activities from all the health institutions, as an integral part of the general health services.
- ◆ To vaccinate with BCG a majority of the eligible infants in the community, in an efficient manner.

ACTIVITIES UNDER THE PROGRAMME

The basic organisational unit of National TB Programme is District TB Programme (DTP). There are four activities under DTP namely:

- ◆ Case finding
- ◆ Treatment
- ◆ Management
- ◆ Recording and reporting.

Case Finding

Case finding activities in District TB Programme are undertaken amongst symptomatics attending the various health institutions in an integrated manner. Peripheral Health Institutions (PHIs) detect TB patients by examining the symptomatics attending these health institutions.

Treatment

Under the programme the treatment of sputum positive TB patients has been accorded priority over that of sputum negative cases in order to cut the chain of transmission. Treatment is decentralised and is offered on domiciliary basis. Anti-TB Drugs are issued free and defaulter action is taken in respect of TB patients who default in the treatment.

Management

Management of District TB Programme covers planning, implementation and maintenance of various activities under District TB Programme and the responsibility of this rests with District TB Officer assisted by his key staff.

CAUTION



Cough for more than 2 weeks
Chest pain
Blood stained sputum
Fever for more than 2 weeks
Loss of appetite
Loss of weight

IT MAY BE TB
SEEK MEDICAL HELP

Help control spread of TB

Recording and Reporting

The activities under the District TB Programme are co-ordinated through a system of proper recording and reporting. This facilitates rendering the service to the community and preparation of the National TB Programme Report.

Health Education

Tuberculosis is a medical as well as a social problem. Continued motivation and education of the community, the patients and children, the students, medical and para medical personnel and general practitioners etc., on various aspects of the TB disease and its control is also an important factor to enlist their co-operation in checking the spread of Tuberculosis.

This is being carried out by producing booklets, pamphlets, radio spots, T.V. spots and advertisement in newspapers on TB and its control.

Resources available for control of Tuberculosis in India

Institution rendering anti-TB services

- ◆ District Tuberculosis Centres 390
- ◆ Implemented Rural Health Centres 17850 (Estimated numbers)
- ◆ Other TB Clinics 330
- ◆ Tuberculosis Demonstration and Training Centres 17
- ◆ Beds available 47000 (Approx.)

International Assistance to NTP

Swedish International

Development Agency (SIDA) is supporting the National TB Programme since 1979 by supplying X-ray units with odelca cameras, miniature film rolls, limited quantity of anti-TB Drugs and vehicles etc. This has helped to expand the programme considerably.

WHO is also assisting the programme by providing short term consultants, fellowships essential equipments for National TB Institute, Bangalore and TB Research Centre Madras. WHO is also assisting the above two Institutions for conducting short term re-orientation, training courses/seminars for Senior Health Administrators of the States/UTs and teachers of Medical Colleges in the country.

Problems in the implementation of the Programme

Problem

- ◆ District TB Programme has yet to be implemented in 80 Districts of the country and about 25% of the PHIs of the country are yet to be brought under the programme.
- ◆ Non-availability of trained key personnel, vehicles in the District TB Clinics throughout the year.
- ◆ Non-availability of trained whole-time State TB Officer in many of the States.
- ◆ In about 25 to 30 % of the PHCs, laboratory technicians are over-burdened with other works like Malaria etc., and in many of them no technician has been posted.

- ◆ Non-supply of adequate quantities of anti-TB drugs/ material/equipment etc., for treatment and case finding activities at PHIs.
- ◆ Potentials of MPWs/Health Guides in case finding and case holding activities have not been fully exploited.
- ◆ In good number of Districts of the country where either no TB Beds exists or if exist, the number is less than 10.
- ◆ With the improvement of case finding activity of the programme, it has not improved qualitatively.
- ◆ Rising cost of anti-TB drugs, materials/equipments etc.

Trend of Tuberculosis

- ◆ There is a concentration of cases in the higher age group.
- ◆ The prevalence of disease in younger age group is low and has shown a decline over a period of time.
- ◆ The prevalence of infection in new borns is on decline as per study conducted by NTI
- ◆ There is a shift in the nature of the disease from acute fulminating exudating type to more chronic fibrotic type and reduction in the primary disease.

Thus, there is evidence to suggest that the Tuberculosis situation in India today is on decline. □

TB still a health hazard

Tuberculosis continues to be a major health problem in Assam's Kamrup, Karbi Anglong, Dibrugarh and Dhubri districts despite battling against it for the past four decades.

The number of cases under treatment during the 1990-91 were 76,639 and new cases detected during the same period were 21,866 according to a report of Voluntary Health Association of Assam.

It also said that leprosy was another health problem in the state with a prevalence rate of 3.02 per 1000. In the hill districts, the prevalence rate was as high as 5.8 per 1000 while in the plains it was 1.24 per 1000. The prevalence was high among tea garden labourers, it said.

Source : The Sentinel, Guwahati, October 16, 1994.

National Tuberculosis Programme: A Social Perspective

Dr. Imrana Qadeer

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Estimates in 1980's on the basis of an extensive study (1), show that there are 8 million cases of Tuberculosis; a number that is same as in the fifties. It is claimed on this basis that the National Tuberculosis Programme (NTP) has failed to make a dent on the problem of tuberculosis. This claim then justifies a review of NTP's Technological and Organisational components and proposes a new technological strategy. A multi-drug short course chemotherapy (SCC) has been proposed to provide a more aggressive technical intervention which gives better cure rates. The "passive" strategy of the existing NTP is being criticised. It is proposed to introduce worker training for TB, to intensify supervised treatment and to improve cure and case finding. Even targets and institutionalised treatment is being talked of.

To understand the comparative limitations of this proposed strategy it is important to understand the basis of NTP, its place in India's Health Service System and its various social dimensions.

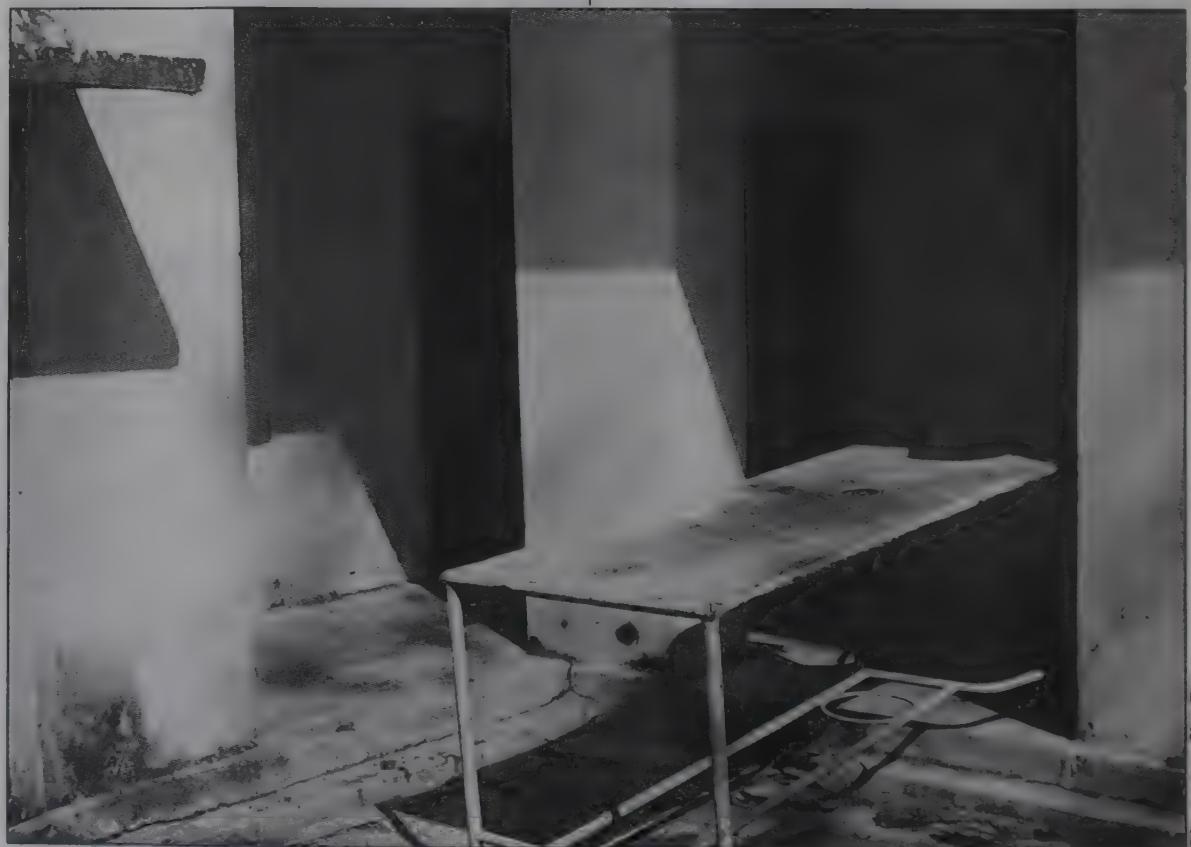
The basic strengths of India's NTP are:

- ♦ It is a need based programme which treats TB as a part of the total suffering caused by disease.
- ♦ It is fully integrated into the General Health System. Its level of efficiency is therefore determined by the efficiency levels of the health system. *If the latter improves NTP will also improve and expand its*

coverage and effectiveness.

- ♦ It uses a technological package for diagnosis and treatment that is cheap, effective and has evolved on the principles of optimisation. It diagnoses cases on the basis of sputum positivity and X-ray. It could give 65% sputum convertibility, with 50% case holding, with stan-

mopped up continuously for 15-20 years. Only then, can we expect to deal with cases that were caused by infections which occurred 15-20 years back. In other words, short term lowering of prevalence will not influence incidence of tuberculosis. This means that the role of chemotherapy is limited and it can only be seen as a supportive



Preparedness of a PHC in Orissa?

dard treatment (2).

- ♦ It had an inbuilt monitoring and evaluation system.
- ♦ It takes into account the secular epidemiological trends and is conceptualised as one of the interventions assisting TB decline.

It is well recognised that to have an epidemiological impact, it is necessary to influence TB prevalence and incidence. For this, about 70% of the cases have to be

step to augment natural trends. Its impact is dependent upon administrative and operational efficiency of the General Health Services.

This is a very critical aspect of NTP. There are no short cuts. A long term programme can be sustained only if it is realistic and takes into account resource constraints, the need for a systemic approach towards infrastructural requirements, and sociological aspects within and outside the organisation. We examine in the following paragraphs the social

dimensions of NTP and argue that the NTP did take these social issues into account. It was sensitive to the organisational structural, socio-psychological and economic issues within the organisation as well as outside it.

Sociological Components of the Programmes

- ◆ The sociological sensitivity of the programme is reflected in many of its components. For example, instead of prescribing a battery of laboratory tests, NTP used symptoms as the basis of making the preliminary diagnosis. This not only was a simple tool but also cheap and time saving device which could be utilised for screening purposes.
- ◆ Similarly, 'consciousness' and 'worry' about symptoms that compelled people to seek institutional help were used as the basis for a passive case detection strategy. This again was cost effective as no burden was added to the general health care system, at the same time patients awareness ensured their participation. Studies done by Banerji and Anderson demonstrated that **50 per cent of those who were seeking help from medical institutions, were being sent back with cough mixtures.** The programme thus assumed that when this 50% is provided treatment, it would motivate those 25% who were conscious but not worried and had not taken any action (3).
- ◆ Thirdly, at the level of treatment also, NTP revolutionised therapy by using home treatment instead of the earlier institutional therapy. Under ideal conditions home treatment showed 86% conversion. However, test runs demonstrated that in real life conditions only 65% of the patients who took treatment for the required period responded.

Coverage of the diagnosed cases by full treatment improved with domiciliary treatment. This improved the quality of intervention (with an improved case finding at DTC (from 200-300 to 4,300 with the use of symptoms, sputum and radiology) even 50% meant 2150 cases treated). The social implications of this were immense. Treatment not only became cheaper and easily accessible at peripheral institutions but it also allowed patients to continue their normal life with minimum disruption. This was particularly critical for the poor who could hold on to their jobs and maintain their families (4).

Thus, need based, cheap and domiciliary therapy was socially more acceptable and hence promised higher patient compliance. It was hoped that in an integrated programme, efficiency of NTP will improve with the strengthening of the service.

Yet another social aspect that the programme planners explored was the reasons of high levels of 'default'. It was again found that:

- ◆ the defaulter was sometime actually taking treatment from another source
- ◆ the diagnosis was not correct
- ◆ the defaulter after a while started and completed treatment
- ◆ at times patients were not adequately informed about the necessity of prolonged, continuous treatment
- ◆ only some had stopped therapy despite full knowledge (5)

Even though this understanding reduced the

real problem of defaulting (refusal by those who can infect others), the danger to public health and the possibility of drug resistance among defaulters was recognised. This however, could be taken care of only partly by improving the working of NTP, as the reasons of real default were rooted in the social circumstances of the people. We will examine these later.

Social Problems in Implementation

Implementation of the NTP faced many social problems which were actually a part of the planning process within health services.

- ◆ While for evolving the NTP an interdisciplinary team approach was used and TB was treated as a component of the total suffering caused by disease, other communicable disease control programmes did not use this approach. The

IMPORTANT



**Take anti TB drugs
for the whole duration
without break**

TB IS CURABLE

Help control spread of TB

results of this dichotomy were disastrous. Programmes such as Family Planning and Malaria Eradication, were conceived as vertical programmes. They consumed huge chunks of resources and failed to relate themselves to other disease problems or programmes meant to control them.

This distortion of priorities within health services system was rooted in the **social nature of planning**. Populations were seen as problem even though it was their hard work that created the wealth of the nation. Diseases were to be eradicated with technological magic wands. The social root of communicable diseases -the poverty of the people - was neglected. Like in the trickle down approach to economic "development", technology was to bring about changes in the health sector also. The result of this kind of planning was that the **socially sensitive NTP was trampled by the techno-centric programmes for disease and population control, and general health services became their hostage. The programme of TB control thus failed as a result of conscious planning and deliberate neglect.**

♦ The priorities were reflected in the training of workers and managers of health delivery systems. **The majority were callous towards NTP and obsessed with the targets of the vertical programmes.** They neither understood the logic of NTP nor were they accountable for their ignorance and inefficiency. Year after year "best district" prizes were awarded solely on the basis of Family Planning Programme performance. In other words, **the inefficiency of the NTP was a contribution of the general priority setting and planning processes and was not a result of its weakness.**

In fact as early as in 1962, it had been demonstrated that with the given level of efficiency in urban TB clinics, 18% of the cases diagnosed failed to complete treatment though they were traceable, 22% were treated outside and therefore lost to follow up, 23% were lost as they lived elsewhere and 17% never came back after the initial diagnosis. This meant that with urban clinics 80% cases were lost due to organisational reasons (6). Thus only 20% actually completed treatment. This proportion rose to 43%, if the 23% treated at other places were included.

It was obvious then, that provision of treatment through peripheral institutions was crucial. Despite this knowledge however, vertical programmes held sway and NTP remained peripheral till suddenly global dynamics changed.

Social Issues outside Health Service System

The important social problems that plague NTP are (a) default and (b) uncontrolled interventions by the private sector. Both these need to be understood and acted upon.

♦ **Default:** The problem of real default is closely linked to the poor administration of the programme. Apathy of the doctors, distances, non-availability of drugs on the one hand, and problems of inaccessibility of the peripheral institutions arising out of poverty of the people on the other hand, constitute the main reasons of default. Prescriptions for the market and advice to come again to collect drugs not available are the two most demoralising factors for those who leave a day's wages or borrow money on usurious interest, to reach a PHC.

Covering long distances and non-availability of transport creates many more problems. More

often treatment is discontinued not because they do not wish to take it but because they have no other options. The problems are bound to be much more among women. Migration to other places in search of work is yet another problem, for the poor cannot live on tablets and need sustenance as well.

It needs to be pointed out then that in conditions where almost 50% of the people live below poverty line, even the best of NTP cannot fully resolve the problem of default unless conditions of subsistence improve.

♦ **The Private-Sector:** The growing private sector which has no responsibilities towards public health and on which the State has no control, adds to the problem of TB control. The private practitioners hardly ever send patients to DTCs and when they do, it is often too late. The drug regimens used by them do not necessarily follow the NTP directives and even if correctly diagnosed, these cases are not regularly recorded and followed up (8). Given the diversity of private practitioners, most of the patients are not adequately informed about their illness. Their inability to be consistent in treatment often becomes a source of profit making for the practitioner. This growing parallel intervention needs to be guided and controlled and its work on tuberculosis monitored.

The challenge to health workers then, is to recognise these social dimensions within and outside the sphere of NTP. To demand better management of NTP, and strengthening of the health delivery system by ensuring drug supplies, laboratory facilities and a place of priority to NTP. In fact today when the Panchayati Raj is being vigorously ushered, there is an exciting opportunity of introducing

an element of people's participation and control to make NTP come alive. It is the only national disease

control effort which was based on people's needs and scientific

principles and we must strive to retain its integrated nature.

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Tuberculosis and TB Control Programme

Tuberculosis, an ancient disease, is one of the most prevalent diseases sparing no country and race in the world, which is caused by a definite infective micro-organism, unlike many other prevalent diseases affecting millions of people throughout the world, like diabetes, high blood pressure, heart disease, and cancer, which are responsible for taking heavy toll of lives. Tuberculosis is caused by a micro-organism named *Mycobacterium Tuberculosis*, first discovered by that great country doctor of Germany, Robert Koch, in his home-made laboratory, for which the future generation is ever grateful to that great scientist.

Tuberculosis most commonly affects the lungs which is called the pulmonary type, and when it involves the other parts of the body except the lungs, it is called the extra-pulmonary type. There is no part of the human body that may not be affected by Tuberculosis except the hairs and the nails. There are different types of *Tubercle bacilli* like human type affecting man, Bovine type affecting the cattle and Avian type affecting the birds. But it is not only the human type that may affect the human beings, Bovine and Avian types can also be responsible and cause disease in man. All different types of bacteria, which produce host of diseases in man and animals are not ordinarily visible under the microscope unless special colours are used to stain them. *Tubercle bacilli* are not stained by commonly used stains but by a special stain called Ziehl-Neelsen's stain. There is another member of the same family - the *Mycobacterium Lepre*, which is responsible for another dreaded disease called Leprosy.

The present status of Tuberculosis in the health scenario is grim and the problem is

staggering. TB takes one life in India every minute. Tuberculosis claimed the lives of poet Keats, painter Modigliani, musician Chopin, mathematician Ramanujam and south American liberator Simon Boliver. This single infection kills 5,000000 every year and an equal number are cured. But addition of one million sputum positive cases annually nullifies the affect, states the annual report of the Ministry of Health and Family Welfare, the Government of India, for 1993-94. Ninety-three percent of deaths from tuberculosis occur in the developing countries, while India accounts for one fourth of the global TB cases.

It may be frightening to know that all of us are infected by the bacteria for Tuberculosis at some time of our life. Then why all of us do not suffer from Tuberculosis? It is due to the fact that natural defensive mechanism, which is in-built in our system by mother nature, takes care of the invading micro-organisms it either destroys them or makes them ineffective. But here comes the latest gift to the mankind, the AIDS - the Acquired Immuno Deficiency Syndrome, a virus disease which shatters the natural defensive mechanism of the human body. It has led to hundred times increased incidence of TB in the developing countries. To look into the crux of the problem, we do not have to go far, as in our neighbouring state of Manipur eleven percent of TB patients are HIV positive - the Human Immuno Deficiency virus responsible for AIDS. There are estimated 1.6 million HIV positive people in India, of whom, fifty percent are also TB infected.

For control of tuberculosis, the Government of India had introduced the National Tuberculosis Control Programme (NTCP) in 1962. The basic functional units of NTP are the District

Tuberculosis Centres (DTC), which carry out their activity with the active cooperation of the Peripheral Health Institutions (PHI). 390 DTCs are now functioning all over India. In Assam, we have 17 DTCs in 17 districts. Six DTCs are yet to be started in the six newly created districts. The functions of a DTC are : detection of as many tuberculosis cases as possible, examination of sputum for *Tubercle bacilli*, examination of blood, chest X-ray by Mass Miniature Radiograph (MMR), to render 12 months standard chemotherapy to non-infective sputum positive cases, follow up of the cases till recovery, to detect drop out and lost cases, and to carry out BCG vaccination by trained staff.

At all India level, the programme is monitored by the National Tuberculosis Institute, Bangalore. The NTI also imparts training to the medical officers and para-medical staff associated with the programme. The National Tuberculosis Control Programme is a Centrally sponsored scheme and the Government of India bears fifty percent of the expenses by providing vehicles, anti-TB drugs, X-ray machines, MMR roll films etc. The State Government has to bear the other expenses related to the programme, like provision of accommodation, salary to the staff, provision of medicine, maintenance of vehicles, health education etc. But it is to be admitted that the facilities provided to the TB patients, including the supply of drugs, are inadequate and the Government is sieged with the magnitude of the problem.

Source: Dr. N. Bharali, *Assam Tribune*, Guwahati, October 3, 1995.

National Tuberculosis Control Programme

Dr. B. T. Uke is the Director of National TB Institute, Bangalore.

Dr. B. T. Uke

Tuberculosis continues to be a major public health problem in India. The population of the country as per 1981 census was 685 million and it is estimated that as on today the population of India could be more than 800 million. It is estimated that there may be about 2.5 to 3 million sputum positive cases and about 5 to 6 million sputum negative non-infectious cases in the country. As per the estimates it is observed that about 50 persons per one lakh population die due to tuberculosis every year in the country.

In order to tackle the problem of tuberculosis, National Tuberculosis Programme (NTP) has been implemented in the country since 1962 which was evolved by National Tuberculosis Institute (NTI), Bangalore after extensive field research.

The main objective under the programme is to reduce suffering, disability and death from tuberculosis by detecting as large a number of tuberculosis patients as possible and treat them effectively.

Under the programme the District Tuberculosis Centre (DTC) is being established in every district of the country to organise communitywide District Tuberculosis Programme (DTP) in association with all the existing medical and health institutions in an integrated manner. DTC functions as a referral centre in the entire tuberculosis control of the district. Its key personnel trained at NTI, Bangalore in laboratory and X-ray diagnosis, treatment organisation and community

control of tuberculosis. They make tours to existing peripheral and medical institutions including primary health centres which are implemented under DTP, train the medical and para-medical personnel of these institutions in various essential activities under the programme, supervise their working, ensure proper record keeping and reporting. DTC also acts as a TB clinic in the town or city of its location. Thus, DTC serves as a base for carrying out case-finding and treatment programme throughout the district with the help of the available network of health services so that these facilities are brought nearer to the homes of the patients at minimum expenditure and on a permanent basis.

PRESENT POSITION OF THE PROGRAMME

Establishment of DTCs

At present out of about 459 odd districts in the country 390 districts have been provided with fully equipped (equipped with X-ray unit with odelca camera and laboratory equipment) DTCs. At all such centres a team of medical and para-medical personnel duly trained at NTI is supposed to be available.

In addition there are about another 330 TB clinics functioning in the country which are mostly located in big cities and towns and are equipped with small screening (fluoroscopy) plant or a small X-ray unit catering to the needs of the local population living in their area.

Tuberculosis Demonstration Centres

One of the objectives under the DTP has been to establish a Tuberculosis Training and Demonstration Centre in each of the major states of the country, to provide basic training to para-medical personnel of different categories required, to man the TB clinics in the respective states and to provide re-orientation training to medical personnel, including the general practitioners. 17 such centres are functioning in the country at present. Apart from the training, these centres are supposed to guide, supervise and co-ordinate the technical activities of the programme in various states.

Tuberculosis beds

A total of about 47,000 TB beds are available in the country for treatment of patients suffering from tuberculosis. With the advent of potent anti-tubercular drugs a large majority of the TB patients are treated on domiciliary basis and only certain selected group of patients those who are seriously sick or suffering from some emergency like haemoptysis, pneumothorax, for surgical treatment or social destitutes could be admitted in TB hospitals. Thus the policy is to utilise TB beds as an adjunct to domiciliary treatment.

Health Education

There is a component of health education under the programme to increase the awareness of the community and involve the general practitioners. Stress has to be given

on health education. NTI and Directorate General of Health Services (DGHS). TB Section has developed booklets for general practitioners, pamphlets for general public. Radio spots, TV spots and advertisement in newspapers are some of the other activities undertaken on health education under the programme.

International Assistance

The International agencies like UNICEF, WHO and Swedish International Development Agency (SIDA) have provided necessary support and assistance to the NTP. The mass BCG campaign in 1951 could be launched with the active support of UNICEF. Initially when the programme was evolved by the NTI, Bangalore in 1962 the UNICEF assisted newly established DTCs by supplying X-ray units with odelca camera, laboratory equipments, vehicle, etc. SIDA also assisted NTP by supplying X-ray equipments with odelca camera and limited quantity of anti-tubercular drugs for pilot study of Short Course Chemotherapy (SCC). SIDA also supplied some vehicles for effective supervision of the programme.

Research activities under the programme

National Tuberculosis Institute, Bangalore was established in 1959 by the Government of India with the help of WHO/UNICEF to evolve nationally applicable tuberculosis control programme and to train the key personnel required for manning the programme in the country. Apart from training the district teams, NTI conducts orientation courses for health workers engaged in TB control programme.

A number of studies have been undertaken by the Institute since its inception which have shown how to apply tuberculosis measures on community basis specially in the rural areas. Institute is also engaged in important epidemiological,

sociological and operations research connected with the tuberculosis programme. The Institute also has been entrusted the responsibility of monitoring of the programme based on the periodic reports. Reports received at the Institute are analysed, compiled, tabulated and feed back is given to the respective districts and states for corrective actions. The Institute is also recognised by WHO as a Collaborating Centre and conducts International Training Course for the candidates from abroad.

Apart from the NTI, Bangalore there are two other institutes which are involved in research and TB control: TB Research Centre, Madras under ICMR and LRS Institute of TB and Allied Diseases at Delhi.

BCG Vaccination

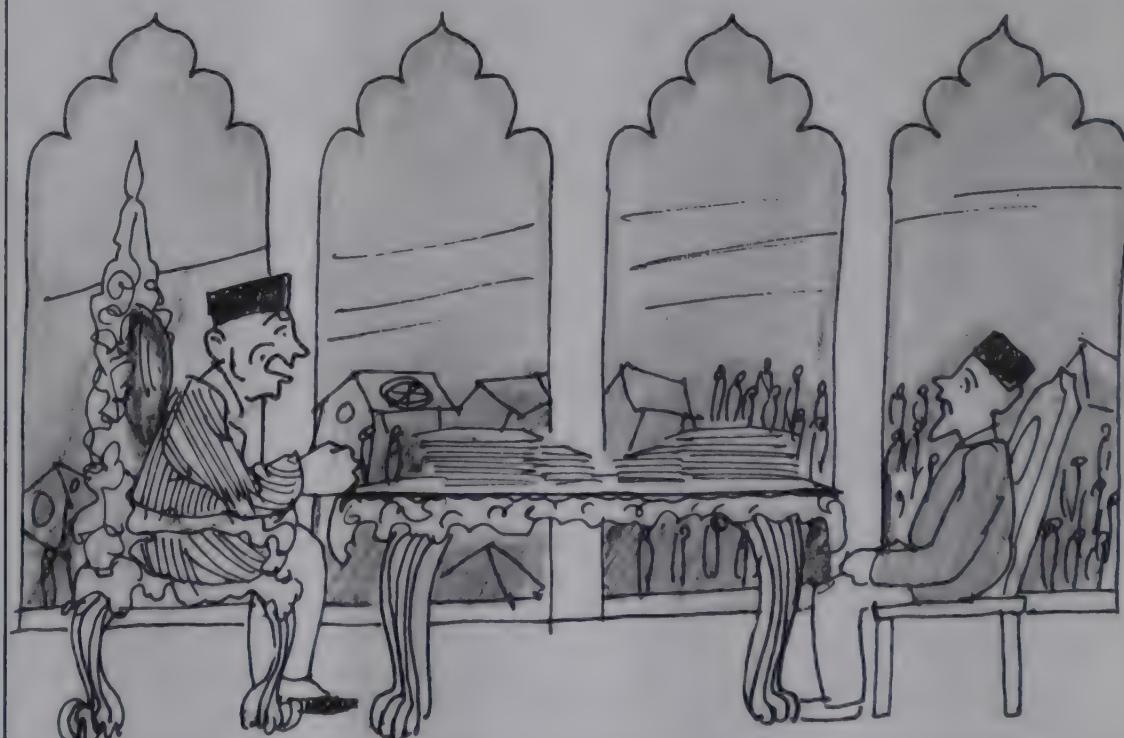
A large scale controlled study on effect of BCG vaccine was undertaken by the ICMR in collaboration with WHO in Chingleput district of Tamil Nadu state. Results obtained from the study showed that BCG vaccination was not found to protect the population from adult

type of pulmonary tuberculosis. However, the study did not throw any light on the effect of BCG vaccination in children below 5 years of age as they were not observed under the trial. In view of this Government of India in consultation with ICMR and other experts in the country decided to continue BCG vaccination in children below 0-1 year age group. BCG now has been integrated as an integral part of Universal Programme of Immunisation.

Assessment and Evaluation

Since its very inception an inbuilt system of monitoring and assessment of the performance has been laid under the programme. Detailed reports of the functioning of the various essential components of the programme are being obtained on quarterly basis by the NTI, Bangalore, where the reports are analysed, performance assessed and needful periodical guidance is rendered to the individual DTCs and respective states. The countrywide detailed assessment report is also made and circulated to the State Health Authorities through Department of Health by the office of the DGHS

T B PROGRAMME
CENTRE - 50% + STATE - 50% = 100% NON COMPLIANCE



for necessary corrective action.

Pattern of assistance

The National Tuberculosis Control Programme is a centrally assisted scheme with 50% central assistance to the states and 100% to the Union Territories and Voluntary bodies. This assistance is confined to supply of anti-tuberculosis drugs, material and equipment. No cash assistance is provided under the programme.

Achievement of the Programme

- ◆ Coverage of the programme:
About 85% of the districts and 75% of the PHIs are covered under the programme.
- ◆ More than 15 lakh new TB cases are diagnosed and put on treatment annually.
- ◆ SCC has been implemented in 252 districts of the country.

- ◆ Financial allocation for the programme has increased considerably.
- ◆ Mortality due to TB has come down to a great extent.

Problems faced in the implementation of the programme

Since the Fifth Five Year Plan period when the pattern of assistance was modified and the scheme of establishment of DTCs and TB beds were passed on to the states, achievements in respect of implementation of the above schemes slowed down as the State Government could not implement the scheme due to the financial constraints.

There are about more than 60 districts in the country where fully equipped DTCs have not yet been established.

Non-availability of trained key personnel in the DTCs. Field team of trained personnel are available only in about 20% of the districts.

Non-availability of vehicles in many DTCs has adversely affected the supervision of the programme.

Non-availability of lab technicians in about 25-30% of PHIs has affected the smooth implementation of the programme.

Full time trained State Tuberculosis Officers are not available in majority of the Tuberculosis centres.

Rising cost of anti-tubercular drugs, non-availability of anti tuberculosis drugs, insufficient quantity are some of the problems faced in the programme.

Due priority is not given to the programme by the majority of the states. □

Kalpana Joshi's Death Closes a Fiery Chapter in History

Kalpana Joshi, who died in Calcutta after prolonged illness on February 8, made an impact on the country's freedom struggle and that too through a movement which, thanks to the official interpretation of history seems diminutive in comparison to the mainstream.

Today's youth may consider the revolutionary uprising in the Chittagong hill tracts as a romantic adventurism. But deep down, the story of the armoury raid, when recounted, still inspires.

Even today in countless homes across the country, the April 18, 1930 Chittagong Armoury Raid is relived. Every child in Bengal knows about 'Masterda' and his band of 62 followers, who, challenged the might of the British Empire with a nationalist fervour and some country made weapons.

'Masterda' was Surya Sen, charismatic village school teacher. Rejecting Mahatma Gandhi's pacifist brand of struggle, he led his Indian Republican Army on a confrontation course with the military might of the British.

Chittagong at that time was housing the armoury of the British Reserve Force and the Railway Auxiliary Force. 'Masterda' planned a surprise raid on these buildings to collect arms and ammunition in order to offer it to like-minded groups to use against the British.

But though the first part of the plan was successful, the loot was not big. The revolutionaries cut off telegraph lines, uprooted railway tracks, and indeed cut off

Chittagong from the rest of the country for a few hours. But the British reinforcements were quick to arrive. The revolutionaries, who survived the early rounds of the fierce fighting, withdrew to the Jalalabad hills around the town, where after several days of resistance, they were all massacred.

Kalpana Joshi was then Kalpana Dutta. She was from a well to do family of the region. She was captivated by 'Masterda'. Kalpana was a fourth year student of local college when duty called.

She was asked to join the 'Nari Bahini' with the specific role of providing aliases for the members of the assault group after the breakout from Chittagong.

Masterda and his principal lieutenant, Tarakeswar Ghosh Dastidar, survived the Jalalabad hills massacre and eluded arrest for over two years. They were finally betrayed to the police in 1933. Kalpana had already been arrested by then.

The three were put on trial together. Her uncommon beauty lent a glamour to the young female revolutionary's image. While Sen and Ghosh Dastidar were sentenced to death and hanged, Kalpana was sentenced for life to the Andamans. But a public outcry, to which Gandhi and Rabindranath Tagore lent their voices, led to her being moved from jail to jail all over the country over the next nine years, before her eventual release in 1941.

After this Kalpana went to Bombay and

joined the Communist movement which had its hub there, chiefly because of the CPI's mobilisation of the mill and dock labour. She fell in love with PC Joshi, the second general secretary in the undivided CPI and married him. She played an active role in the short-lived uprising of the naval ratings in 1946.

Though she was one of the most dazzling figures of the freedom struggle, Kalpana Joshi never won an election in her life. She lost in her home constituency of Chittagong when fighting on CPI ticket in the elections to the interim government of undivided Bengal in 1946. Incidentally, Jyoti Basu, won his first seat in the same elections, from the Railway workers constituency.

In 1972 she contested as a Congress-CPI backed candidate in the Contai Lok Sabha seat, but lost to Samar Guha of the Praja Socialist party (now of the Janata Dal). But unfazed by electoral reverses she remained active in building up the All India Women's Conference.

Mr. Jyoti Basu paid glowing tributes to the first female firebrand of Bengal, and a contemporary. "Future generations will continue to draw inspiration from comrade Joshi's selfless response to the call of duty and remarkable personality," he said about this unique woman.

Source : Indian Express, New Delhi, February 12, 1995.

Tuberculosis as a Part of General Health

Dr. Shawinder Singh

Dr. Shawinder Singh is Reader in the Department of Social and Preventive Medicine, Christian Medical College, Ludhiana

Tuberculosis is a health problem and cannot be viewed in isolation. We have a family based information system for the health care in the Field Practice Areas of Christian Medical College. There is regular reporting of the vital events and the main focus remains the **maternal and child health and family planning**. The maternal and child health care and family planning services are being provided by the **Urban Family Welfare centre**. During this care the cases with symptoms suggestive of tuberculosis are advised to go for investigations to any of these: private practitioners, the health centre, Christian Medical College.

The "**symptomatics**" are investigated and the diagnosed cases are advised to go for treatment. Many of the "**symptomatics**" are not able to go for investigation for there is no money. We manage to get the investigations done. The majority then are put on treatment. These patients who develop tuberculosis are usually from lower socio-economic strata and are not in a position to pay for long.

District Tuberculosis Centre

The "**symptomatics**" referred for the investigation are put on treatment and then after two months are asked to pay money for getting the anti-tubercular drugs.

The patients cannot afford to pay the money and hence they stop taking the treatment. When the symptoms become severe again the same cycle is repeated.

The patients find it difficult to

buy the drugs and they drop out again and again. Thus they become resistant to the first line of drugs and spread the drug resistant bacilli in the community. Majority of the patients go to the general practitioners first and begin their treatment. One has to pay for the services of general practitioners. This goes on as long as the patient can pay.

The final question boils down to:

- ♦ how to get the symptomatics investigated free and,
- ♦ how to get the diagnosed patients avail the regular supply of drugs free till s/he completes the treatment?

Case detection is not the problem with regular home visiting under the current health care methodology in our field practice areas.

Case holding is meaningless without the easy availability of drug supply.

We are giving a brief summary of the study by our medical interns in our field practice areas. This study was completed in the last month.

Table 1

Prevalence of Tuberculosis in Urban community

Area	Population	No. of cases
C	4546	22
E	4560	21
F	4737	7
Total	13843	50

Table 2
Age- Sex Distribution of Cases of Tuberculosis

Age (yrs.)	Male	Female	Total
0 - 9	3	1	4
10 - 19	4	6	10
20 - 29	4	16	20
30 - 39	3	6	9
>= 40	4	3	7
Total	18	32	50

Table 3
Source of Drugs for Tuberculosis Cases

Source of drugs	No. of Cases
Medical colleges.	9
Private practitioners	20
Civil Hospital (DTC)	13
Outside city	4
*Total	46

* The information about 4 cases is not available. □

Tuberculosis is an impossibility with one who takes freshest air, drinks pure water, eats properly the proper quantity of the proper food and has proper exercise ...

You should try to make your body 100 percent proof against disease.

Gandhi 17.2.1933
(Letter to Mira Behn)

Tuberculosis Programme as an Integral Component of the General Health Services

Prof. Debabar Banerji

A sociological study (1) of the problem of tuberculosis in a rural community in South India revealed that, motivated by the suffering caused by the disease, more than half of all the infectious cases had sought treatment at different health institutions - primary health centres, dispensaries, clinics and hospitals; about a quarter of them were found to be "worried" by the suffering, and most of the remaining cases were "conscious" of the symptoms of the disease.

A survey of the rural health institutions in this community revealed that most of the patients who visited them were not even diagnosed as cases of pulmonary tuberculosis; for the few who were diagnosed as a case, there were virtually no facilities to offer them the treatment.

A Felt Need Oriented Tuberculosis Programme

These findings led to the formulation of the two basic postulates of India's National Tuberculosis Programme:

Firstly, as already a very large number of patients are actively seeking treatment at various health institutions, top priority is to be given in the national programme to providing services to those who have a felt need, i.e., it should be a felt need oriented programme.

Secondly, as those who have felt need seek treatment at health institutions, tuberculosis services should be given as an integral part of the health services provided at different institutions. A series of operational research investigations

were conducted to work out the details of such a felt need oriented programme as an integral part of the general health services (2,3,4). Some of the major premises of the programme are:

- ◆ Cases of tuberculosis can be diagnosed at rural health institutions by examining, by microscopy, sputum from those who come to health institutions with a complaint of chronic cough (4). These findings, incidentally, confirmed the forecasts that were made on the basis of the sociological investigations: ***at least one out of every twenty-four persons reporting with chronic cough at health institutions is a sputum positive case of pulmonary tuberculosis.***
- ◆ Domiciliary treatment of the diagnosed cases from nearby centres can give reasonably satisfactory results (4).
- ◆ Facilities for diagnosis and treatment of tuberculosis cases, including keeping of certain basic records, can be developed within rural health institutions by making marginal investment (3, 4).
- ◆ Services of specialised tuberculosis institutions at the higher levels can be made available to the rural health institutions. This can enable them to refer the more complicated cases to them for getting additional facilities for diagnosis and treatment.
- ◆ At the District level (covering a population of a million and a half), provision can be made to

have a District Tuberculosis Centre. Besides providing referral facilities to the peripheral institutions within the District, such a Centre can be provided with trained staff (2) to carry out also the functions of planning, organisation, co-ordination, training and supervision of all tuberculosis work at various institutions within the District. The District Tuberculosis Centre can also maintain a Tuberculosis Case Register for the entire population of the District.

◆ As a step towards integration of the programme, BCG teams can be attached to District Tuberculosis Centres so that, apart from doing inoculation work, these teams can also participate in other activities of the Tuberculosis programme, for instance, retrieval of treatment defaulters.

◆ There can also be a State Tuberculosis Centre, covering, on an average, a population of about 30 million. Meeting the training requirements and evaluation of the tuberculosis programme in the State can be two of its special functions.

Advantages of an Integrated Tuberculosis Programme

Administrative Advantages

◆ Cost of the Services:

In terms of requirements of personnel, equipment and funds, cost of diagnosis and treatment of a case through an integrated programme is a

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small fraction of what it costs through specialised tuberculosis programme in rural areas (4,5).

♦ **Balanced Growth with the General Health Services:**

One great advantage of an integrated tuberculosis programme is that even with very modestly developed health services, it is possible to build into it a tuberculosis programme. Later on, as more and more resources are funnelled in to strengthen the "infrastructure" of the health services, it automatically strengthens the tuberculosis programme (3). Growth of the tuberculosis programme thus becomes a function of the growth of the general health services.

On the other hand, a specialised tuberculosis programme grows by depriving the general health services of the resources that are badly needed for its growth. This is particularly so in developing countries where there is an acute scarcity of resources. Also, as mentioned earlier, in terms of cost of diagnosis and treatment per case, it gives very poor returns from the investment.

♦ **Increased Organisational Effectiveness:**

Integration of a tuberculosis programme also increases the effectiveness of the health organisation (3), for example:

Development of tuberculosis work leads to mobilization of "unutilized capacity" of the organisation. Use of the microscope for tuberculosis work may stimulate its use for diagnosis of other conditions, e.g., eosinophilia. Development of channels for referring of the cases who need specialised services at the District and State levels lead to more

effective utilisation of these services.

Sociological Consequences

♦ **Providing a Sociological Basis for Allocation of Efforts:**

Dealing with tuberculosis as a problem of suffering, side by side with the suffering caused by other health problems, ensures that investment of efforts for tuberculosis work broadly conforms to the importance attached to the disease by the community.

♦ **Better Acceptability:**

Dealing with those who have felt need ensures better acceptance of the treatment.

♦ **Effect of Meeting the Felt Need:**

Provisions of reasonably efficacious services to those tuberculosis cases who have a felt need may, itself, "generate" felt need among those who are at present merely "worried" or are "conscious". In this way a felt need oriented programme has a potential for including as many as 95% of all infectious cases in the community (1).

Dealing with the felt need of millions of cases through a nationwide network of thousands of health institutions can inspire confidence in the community

and stimulate its active participation in other health and social development activities.

♦ **Epidemiological Implications**

In countries where the incidence of the disease has declined, factors other than a specific tuberculosis programme have played a

NOTICE If TB is suspected



**GET SPUTUM
EXAMINED
(REPEATED EXAMINATIONS
MAY BE REQUIRED)
X-RAY IS RARELY
NECESSARY**

Help control spread of TB

dominant role (6, 7). Dubos and Dubos (6) attribute it to a general rise in the standard of living in these countries; Grigg (7) goes a step further and claims that mere exposure of a population to the tubercle bacillus over a period of time will lead to a decline in the incidence by a natural weeding out of the susceptible population. Some indirect evidence (4) of decline of incidence of disease due to such non-specific factors is also available with regard to the

epidemiology of the disease in India, e.g., similar rates of prevalence in rural and urban population, higher prevalence rates among the upper age groups, comparatively lower virulence of the Indian strains of bacilli mycobacteria, etc.

Therefore, launching of an extensive tuberculosis programme on the presumption that this **alone** can reduce the "pool of infection" appears to be untenable even on epidemiological grounds; at best, it can only reinforce the non-specific factors that are bringing about a decline in the incidence. On the other hand, when such a programme grows as a function of the overall growth of the general health

services, this growth of the programme is justified primarily by the pressure of the felt need for such services in the community; the contribution of such a programme (which is capable of covering some 95% of the infectious cases) to the decline of the incidence of the disease can be regarded as an additional and a valuable by-product.

Summary

Sociological investigations have revealed that more than half of all infectious cases in rural areas seek relief at various health institutions and that as many as 95% of them are conscious of the symptoms of the disease. These findings led to the formulation of a felt need

oriented tuberculosis programme as an integral part of the services that are offered at the rural health institutions. Specialised tuberculosis institutions at the higher levels led support to them by offering them referral facilities. For a population of a million and a half, there is a District Tuberculosis Centre to give them administrative support.

Such an integrated programme is not only very economical, but it also grows along with the general health services. Its orientation to felt need makes it more acceptable. It also has a potential for covering some 95% of the infectious cases in the community. This indicates that, as it grows, it can have an impact on the incidence rates of the disease.

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AIDS, TB Epidemic Predicted in India

India is on the threshold of a dual epidemic of AIDS and tuberculosis with an alarming increase in tuberculosis being reported in AIDS patients surveyed by Government agencies so far, reports PTI.

With over one million human immuno deficiency virus (HIV) cases at present and the virus spreading into the general population from high-risk groups, in the next 10 years, India would outstep the USA and nearly equal the epidemic rates in Africa.

Within eight years of the first AIDS cases being reported in Bombay in 1986, India has now the second highest incidence of HIV positive cases in South East Asia after Thailand, Dr. N.K. Shah, India's representative at the WHO said in the Capital on Wednesday on the eve of the "World AIDS day".

The WHO regional director, Dr. Uton Muchtar Rafel, warned

in his message of the "great explosion in infections" in Asia where countries like Thailand, India and Myanmar were already experiencing dramatic spread of HIV and said the number of infected Asians was expected to quadruple.

The current global figure of 17 million cumulative infections would double to about 30 to 40 million by 2000 AD. Mr. Rafel said.

The National AIDS Control Organisation of the Ministry of Health and Family Welfare sounded alarm bells on Wednesday when it said that till 31st October, 1994, the sero-positivity rate per thousand had climbed to 6.80 per thousand.

Another significant aspect highlighted by NACO was that HIV infection was spreading more because of heterosexual promiscuity.

Source : *The Statesman, New Delhi*, 1.12.94.

Anti-TB Drugs : National TB Control Programme And The New Drug Policy

Dr. Mira Shiva, MD, is Head of Division, Public Policy, in VHA. She is a renowned health activist.

Dr. Mira Shiva

The fact that Tuberculosis was known as the 'white plague' and is a major public health problem, is well-known. So also is the fact that inspite of TB Control being one of the National Health Programme, as well as it being in the late Prime Minister Indira Gandhi's 20 point programme, it has not received the kind of priority and concern in budget allocation, humanpower development and provision of services as was due to it and due to also those whom it affected. It is not that the extent of the problem is not known.

The improvement in the social and economic status of the people, which ensures better working and living conditions are the only long term real solutions. The first and the major line of defence against Tuberculosis, is also well-known.

Role of Curative Care

The diagnosis of Tuberculosis patients and their adequate and complete treatment is absolutely crucial, i.e., effective case finding and case holding in Medical jargon. While the prevention of tuberculosis was far more important, unfortunately **the focus of most TB programmes and inputs in TB control has been mainly towards curative care.**

Shortages of anti-TB drugs have made Rational TB Care extremely difficult even by committed TB health workers. While on the other hand irrational therapeutics in TB with over use and misuse of cough syrups, tonics, steroids etc., sometimes at the cost of the main TB drugs is creating a major therapeutic

problem. No standard TB regimen exists outside the Government National TB Control Programme (NTCP).

The NTCP has tended to focus at the government health institutions, e.g., DTC and government hospitals. Unfortunately more than 90% of health care services are privately purchased by the people. The availability of drugs, the drug prices, the prescription patterns, the quality of health education etc., will obviously influence the patient's response.

The following have been identified as hurdles in rational care in TB:

- ◆ Lack of rational prescription and medical auditing
- ◆ Prescriptions by untrained and unqualified health personnel
- ◆ Lack of adequate lab facilities for confirmation of diagnosis
- ◆ Irregular use and overuse of costlier newer anti-TB drugs
- ◆ Failure to communicate the consequences of drug default and the concept of drug resistance
- ◆ Frequent changes of drugs due to non response, i.e., actually due to default, (due to cost of drugs, non availability, or ignorance about consequence of default). This has made TB management difficult
- ◆ Problems with referral to District TB Centres etc., of patients who are not responding

Unlike other more glamorous diseases requiring high tech

intervention TB is a disease of poverty. It continues to have a social stigma attached to it even in 1995 and, therefore, is kept hidden even from relatives. Even then over 52% symptomatic patients seek medical care and 90% come away with a bottle of cough syrup.

The access to and availability of health care services, quality of health care, the budget allocated for TB, etc., are the factors that decide the success or failure of the NTCP and consequently, the fate of the TB patients.

Here we will address the following two issues:

- ◆ Shortage of Anti-TB Drugs (specially of standard drugs)
- ◆ Problems with Rational Therapeutics in TB

Shortages of Anti TB Drugs

The issue of shortage of anti-TB drugs has been coming to the forefront time and again for more than two decades. Complaints from groups and organisations dealing with TB and numerous reports in the newspapers are testimony to this fact.

Way back in 1981, ICMR-ICSSR in its alternative strategy of health for all had reported that **while we had 1/2 of world's TB patients, we produced only 1/3 of the TB drugs required.**

It has been stated that usually the central government has sufficient stock of anti-TB drugs, and that the problem lies with the state government failing to raise their 50% of the contribution to the TB programme, without which central government is not in a



Shortage of Anti-TB Drugs

position to release its own contribution of 50%.

Problems with indenting, including delays in processing of the indents and the release of drugs have sometimes affected speedy distribution.

Anti-TB drugs made available to PHCs have been in accordance with the number of TB cases detected. Low case finding means, less drugs.

Problems with the pharmaceutical manufacturers not honouring the tenders submitted by them to the government, which have been accepted by the government, have in the past created unforeseeable problem with acquiring the required anti-TB drugs for the NTCP. Worse of course was, if drug purchase was expected to be based on the lowest tender.

Since the problem of non-availability of anti-TB drugs has not been limited to the government health sector but also the market, it is important to look at the production of anti-TB drugs in the past decade.

Inspite of certain drugs (eg., anti-TB drugs) being categorised as essential drugs for National Health Programmes, of the Health Ministry, there is no clause in the existing Drug Policy nor the draft of the new Drug Policy being formulated by the Chemicals Ministry, that can mandate the production of even the minimum amount of es-

sential drugs. A clause earlier at the time of Hathi Committee recommending 20% production of essential and life saving drugs quietly disappeared, sometimes back.

Inspite of repeated demands of Rational Drugs and Health Campaigners, that having an Essential Drugs List was meaningless unless it was linked with ensuring adequate production of these essential drugs, it has failed to be incorporated in the Drug Policy.

Inspite of the Drug Policy being in the process of formulation since 1984 the attempts that have gone into the very basic step of assessing demands has been quite warped. The assessment of demands continues to be on similar lines:

- ◆ Past trends of production of the drug
- ◆ Past trend of import of drug
- ◆ Past actual annual growth rate and its total availability
- ◆ Trends in growth rate of various formulations as per ORG report.

◆ Obsolescence of the drug and anticipated introduction of new drugs with less side reactions and better substitutes being available.

◆ Requirement of the drugs in National Health Programme

◆ Anticipated export of bulk drugs and formulations

(Six out of the seven criteria are based on past trends which are often distorted themselves for drugs for diseases of poverty)

The greatest tragedy of it all is that the categorisation of a drug as being 'essential' or 'vital' for the 'National Health Programme' or important for 'decreasing the pain and suffering of thousands' When the need is known, and the health problem recognised it is an *absolutely theoretical and a meaningless exercise as it in no way can ensure adequate production and availability of the most essential and life saving drugs.*

The facade of reviewing the Drug Policy continues and as the new drug policy is on the verge of being announced to further liberalise and globalise - the focus is still the pricing and profitability aspects and not the health aspects at all.

The production of bulk anti-TB drugs in various sectors is shown

Table 1
Sectoral Production of Bulk Drugs (1989-90)

Drug	MNC top 20	Indian sector	Public Indian	Other
Streptomycin	-	-	46.5	53.5
PAS & its Salts	(over 50% production in small scale sector)			
Thiacetazone	-	100	-	-
INH	(Production mainly in small scale sector)			
Rifampicin	(over 50% production in small scale sector)			
Ethambutol	-	90.4	-	9.6
Pyrazinamide	(Production mainly in small scale sector)			

Ref: Review of National Drug Policy and views on 1986 Drug Policy submission by VHAJ-AIDAN-NCCDP in July 1993

In Table 1.

As is evident from Table 1, the MNCs who are supposed to be bringing in foreign investment for growth of high technology requiring pharmaceutical products, are not particularly interested in production of anti-TB drugs as compared to Tonics, vitamins, cough and cold remedies etc. It is unlikely that with further import liberalisation, and removal of clauses in the drug policy which were to ensure production of certain ratio of bulk drugs to formulation, will encourage production of such drugs needed to meet the health needs of patients with little purchasing power.

The production of INH in 1991-92 was merely 25.45 tonnes when the demand estimate was 333 tonnes. The demand estimate for 1992-93 was 366 tonnes, the latest production figures were not available. Shortages of a standard anti-TB drug like INH would doubtlessly affect thousands of patients negatively.

Essential Bulk Drug Production: Case of Streptomycin

Even if essential bulk drugs are produced there is no guarantee that it would not end up with production of irrational combinations rather than single ingredient drugs.

While tremendous shortages of Inj. Streptomycin were being reported, a significant amount of STM bulk drugs were being used for production of irrational combinations, e.g., **Chloramphenicol Streptomycin**—an irrational anti-diarrhoeal exposing children to chloramphenicol toxicity (i.e., agranulocytosis - bone marrow depression). It was because of wide misuse of this kind of combination for viral and other diarrhoea, that it was not merely resulting in unnecessary economic loss to the patient, but was also responsible for emerging drug resistance of

chloramphenicol for typhoid and streptomycin for Tuberculosis.

Similarly use of **Inj. Streptomycin Penicillin combination**, like chloramphenicol-streptomycin, was also recommended for being weeded out by the sub committee of the Government of India's Drug Consultative Committee in 1980. This was not merely because of its wide misuse for infections including chronic bronchitis etc., but masking of TB, i.e., making diagnosis of Tuberculosis with AFB sputum testing difficult.

To this was added the problem of emergence of STM resistance, besides of course, problems of injection being given without adequate sterilisation, exposing patient to injection abcess, HIV, Hepatitis B etc. Also exposing patient to the risk of penicillin, as reaction of penicillin testing is not done with combination while it is usually done when Inj. penicillin is given alone. Charges by compounder or doctor for giving the injection, as well as purchase of disposable syringe shoots up the cost of this injection.

Efforts by Rational Drug Campaigners have gone on for over eight years to get chloramphenicol-streptomycin off the market. Fixed dose combination of streptomycin and penicillin continue to be sold.

Views sought from TB Association India, NTI, WHO and other experts regarding streptomycin-penicillin combination has almost been unanimous that in presence of alternative antibiotics, fixed dose combination of STM-Penicillin has no role in treatment of routine infection—except for infective subacute bacterial endocarditis where it is required in extremely high doses but even here alternates are available.

The only fixed dose combinations of anti-TB drug included in WHO's essential drug

list is INH and Thiacetazone. There has been controversy about fixed dose combination of INH, Rifampicin, Pyrazinamide.

According to the Gazette Notification No.558 GSR 999E dated 26 December 1990, only fixed dose combination of the following in the respective dose (INH, Rifampicin, Pyrazinamide) are permitted.

Drugs	Minimum	Maximum
Rifampicin	450 mg	600 mg
INH	300 mg	400 mg
Pyrazinamide	1000 mg	1500 mg

Brand Rifampicin, a fixed dose combination drug in sub therapeutic dose is supposed to be taken five times and is thereby within the above norm. Is taking of a drug five times daily conducive to patient compliance?

The dosage is justified according to the DCI since the manufacturers record taking of the drug five times per day thus making it a daily requirement.

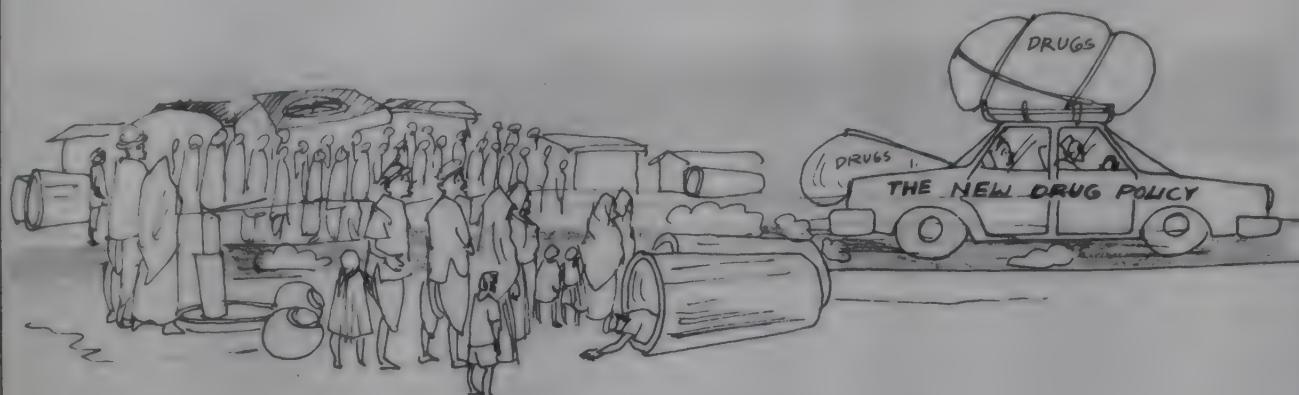
Drug Prices and Policy

The drug prices have significantly increased in the last decade. More so after the drug policy announcement of 1986. Further increase in drug prices is expected after the announcement of the new Drug Policy and yet again after the changes due to multilateral trade agreement (GATT).

Privatisation of curative care for public health problems and price decontrol is going to increase medical care costs for the majority. Presence of health facilities and 'reasonability of price' and 'quality' anti-TB drugs, with adequate comprehensive functional health and drug education alone can ensure rational use of these drugs.

Drugs of Yesterday are Needed Today not Tomorrow

The TB case clearly shows that it is immaterial if discoveries and



inventions are made, and breakthroughs occur — what comes to the poor is very little.

After the discovery of Streptomycin, several new and potent drugs have been discovered. High concessional (profitability) margins are demanded by the pharmaceutical companies in the name of R&D and for breakthroughs that will change the face of the world — of the sick and suffering. This is yet to happen.

According to US FDA between

1981-88, 84% of the new drugs produced by the biggest drug companies had little or no potential for improving patient care and **only 3% were considered significant advances.**

This issue becomes important since higher costs of drugs are legitimised for R&D for tomorrow. If cheaper standard drugs of yesterday cannot be used today — the costlier drugs of tomorrow will tend to stay a mirage.

The trade in pharmaceuticals

very remunerative" public health measures'.

The commodification of 'pharmaceuticals' and commodification of 'medical care' are flip sides of the same process.

Rationalisation of one is meaningless without rationalisation of the other. Can and will the National TB Control Programme, the nation's health policy, the drug policy and economic policy ensure that? That is the challenge. □

Drugs not effective to TB, Cholera

A growing resistance to antibiotics has caused a resurgence of diseases such as tuberculosis and cholera, and measures are urgently needed to combat the trend, the World Health Organisation said yesterday.

"Bacteria are spreading with unexpected rapidity having developed defense mechanisms against existing antibiotics," experts from 23 countries convened by the UN agency said after a four-day meeting that ended on Friday.

"Antibiotics, are losing their effectiveness. Once a new drug has become widely used, resistance to it is

already emerging somewhere in the world," WHO said.

WHO said it called the meeting to discuss the increasing number of reports of drug-resistant diseases.

In Zaire, for example, Rwandan refugees developed dysentery that long resisted treatment until doctors located an effective drug, WHO spokesman Valery Abramov said.

"Resistance is epidemic in many countries and multi-drug resistance leaves doctors with virtually no room for manoeuvre in the treatment of an

increasing number of diseases," said Prof. Jacques Acar of the Pierre and Marie Curie University in Paris.

In hospitals alone an estimated one million bacterial infections are occurring worldwide every day, and most of these are drug-resistant."

Mr. Abramov said "no new miracle drugs" are on the horizon. The pharmaceutical industry is unlikely to manufacture any new classes of antibiotics within the next five to ten years," he said.

Source: National Herald, New Delhi, December 8, 1994.

is big business and India is today in the process of throwing open its markets. Whether the drugs are imported through open General Licence by hospitals, or by drug companies importing from parent company with transfer pricing, it will undoubtedly affect the economy.

With the announcement of the New Drug Policy how much will the people benefit is to be seen. **"Health of the trade" cannot be given priority over "health of the people".** In a 'free market' ideology, does health as a human right have any meaning? Can 'laissez-faire' ensure often "not

Chemotherapy Policy Under National Tuberculosis Programme

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Dr. L. Suryanarayana

Treatment facilities under National Tuberculosis Programme are decentralised and given as part and parcel of the General Health Services through Peripheral Health Institutions. Self administered chemotherapy mostly on domiciliary basis constitutes one of the important features of the National Tuberculosis Programme. The treatment is offered free of cost.

Smear positive cases are given top priority both for diagnosis and treatment with the intention of cutting down the chain transmission. There is provision to treat X-ray suspects and extra pulmonary cases also. Timely defaulter retrieval activities are recommended under the programme.

Drug Regimens Available

The long term and short term chemotherapy regimens are available under the programme. The drug regimen recommended in the programme and the categories of patients for which these regimens are to be used are given in the tables mentioned alongside.

Short Course Chemotherapy has been implemented in 248 districts of the country. 47% of PHIs only coming under these districts have been implemented for SCC. Follow up sputum examinations are recommended after third month and at eighth month in case of SCC regimens and after sixth and eighth month in case of long term chemotherapy regimens.

Data available from the monitoring reports reveal that treatment completion rates are around 35% and 55% with respect

DRUG REGIMENS*

I. Standard Regimen/Conventional Regimen

Regimen Code	Regimen with Drugs** and Dosage	Duration* (Months)	Mode and Rhythm of Administration	Instructions
R1	2 STH/10 TH a) Intensive Phase (2 months) S = 0.75 g H = 300 mg T = 150 mg	12	Inj.S(IM)administered daily. Other two drugs orally daily in a single dose, self administered at home.	Inj.administered at DTC/PHI/other health facilities. Oral drugs issued on monthly basis by DTC/PHI.
	b) Continuation Phase (10 months) H = 300 mg T = 150 mg			
R2	12TH H = 300 mg T = 150 mg	12	Both drugs orally daily at home in a single dose.	Issued on monthly basis by DTC/PHI.

II. Short Course Chemotherapy Regimens

	2 EHRZ/6TH a) Intensive Phase (2 months) E = 800 mg H = 300 mg R = 450 mg Z = 1.5 g	8	All drugs daily at the same time, self-administered at home.	Issued on fortnightly basis.
RA	b) Continuation Phase (6 months) H = 300 mg T = 150 mg		Both drugs orally daily, self-administered at home.	Issued on monthly basis by DTC/PHI.
RB	2 SHRZ/4S2H2R2 a) Intensive Phase (2 months) S = 0.75 g H = 300 mg R = 450 mg Z = 1.5 g	6	Inj.S(IM)administered daily. Other 3 drugs orally daily in a single dose, under supervision.	All drugs administered under supervision at DTC/PHI.
	b) Continuation Phase (4 months) S = 0.75 g H = 600 mg R = 600 mg		Twice weekly; all drugs together.	

* An additional month is allowed for patients to complete the required treatment compensating for the missed collections.

S-streptomycin; R-rifampicin; T-thiacetazone; H-isoniazid; Z-pyrazinamide; E-ethambutol.

** E to replace S & vice versa, depending on availability: E to replace T, wherever not tolerated.

to long term and short term chemotherapy respectively.

With the objective of improving the case-holding activity and the consequent cure rate to 85%, revised strategy under National Tuberculosis Programme with the emphasis on better drug delivery system is being envisaged and certain representative areas in the country have been chosen on a pilot basis in this direction.

Salient Features of the Monitoring Activity Under National Tuberculosis Programme (NTP)

- ◆ 390 out of 480 districts have been implemented under National Tuberculosis Programme (NTP).
- ◆ 252 districts have been implemented under Short Course Chemotherapy (SCC).
- ◆ About 70% of Peripheral Health Institutions (PHIs) in general under District Tuberculosis Programme (DTP) and about 48% of PHIs under SCC DTPs have been implemented for Short Course Chemotherapy.
- ◆ Reporting efficiency is around 79% for District Tuberculosis Centres (DTCs) and 73% for PHIs.
- ◆ Only about 43% of PHIs are being supervised by DTC staff.
- ◆ About 35% potential sputum positive cases are being diagnosed in DTP.
- ◆ Smear positive cases constitute about 20% of the total number of cases diagnosed. Smear negative (X-ray suspects) and extra pulmonary cases account for about 74% and 6% respectively.
- ◆ Smear positivity status out of total sputum examinations works out to about 5% at PHI level and 12% at DTC level against the expectation of 8% and 18% respectively.
- ◆ Treatment completion rate is around 35% for standard

CATEGORY OF PATIENTS FOR TREATMENT		
Regimen Code		Category
R1	a.	Smear negative patients with extensive radiological evidence of disease/cavity/toxaemia.
	b.	New smear positive cases where SCC is not available or a patient is unable to continue SCC.
	c.	Extra-pulmonary patients in general (e.g. tubercular lymphadenitis).
	d.	Cases, sputum positive after treatment completion with RA who are unable to attend DTC or other specialised centres on referral for further treatment.
R2	a.	Smear negative patients with X-ray evidence of tuberculosis other than those in (R1a).
	b.	Lost patients, smear negative on reporting back, irrespective of previous history of treatment.
	c.	Highly irregular patients (e.g. with cumulative default of more than a month in the intensive phase of any of the regimens or in continuation phase of RB), irrespective of the smear result.
NEW CASES		
RB	a.	All smear positive cases newly indexed under DTP, irrespective of age and previous RA treatment outside the programme.
	b.	Serious forms of extra-pulmonary tuberculosis (e.g. meningeal tuberculosis, spinal etc.).
RETREATMENT CASES		
RB	a.	Patients remaining smear positive on completion of treatment with R1, R2 & RA on return after lost.
	b.	Cured patients returning with smear positive result.

Note: Patients requiring retreatment will be referred to DTC for initiation of treatment and sent back to the concerned PHIs for continuation of prescribed regimen.

regimen and 50-55% for SCC regimens.

- ◆ Only about 17 to 18% of DTCs have full complement of trained staff.

- ◆ Revised strategy under NTP emphasising reliable and better drug delivery system is being tried on a pilot basis in certain areas of the country. □

TB claims 4,00,000 yearly

Union deputy minister for health and family welfare Paban Ghatowar, yesterday said tuberculosis is a major problem in India, with 13 million to 14 million patients all over the country.

Nearly 30 per cent of the cases were highly infectious, and the disease claims some four lakh lives in the country each year.

He was inaugurating the 49th conference of TB and chest diseases organised by the TB Association of India and department of TB and chest diseases.

Source : Amrit Bazar Patrika, Calcutta, October 8, 1994.

Tuberculosis in Children : Some Issues

Dr. Varinder Singh
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Dr. Varinder Singh

Tuberculosis remains a major health problem in the World, to date causing 1-2 million deaths annually. Epidemiological data further indicates that it is more prevalent in the younger population. Childhood tuberculosis contributes significantly to the morbidity and the mortality of this age group.

The prevalence of active disease in the overall population is 15-25 per 1,000 population with about 25% of them being open or infectious cases. Prevalence of primary infection in child population is also very high. Nearly 3.4 million children in the country have tuberculosis while 94 million are at risk of infection. In India, 40% of the children by the age of 6 years and 80% by the age of 16 have gathered tubercular infection.

Childhood tuberculosis is commonly a result of contact with a tubercular case. A contact study carried out in British Columbia and Saskatchewan (Canada) in late 1960s and early 1970s showed significant risk of developing active disease even in casual contacts, the risk being higher in contact with sputum positive cases.

A child in close contact with a tubercular adult is at a greater risk, if he also has measles or whooping cough (preventable communicable diseases also occurring with high incidence in the country). Even BCG vaccinated children can develop tubercular disease following infection.

Unfortunately there is a narrow difference between infection and disease in very young children who incidentally are also at a higher risk

to develop severe form of the disease. About 10 -15 % of the children infected with tubercular bacilli develop disease and a similar percentage of those with disease are infectious. Nearly 4 - 10 % of the deaths in children are related to tuberculosis.

Diagnosis of Childhood Tuberculosis

Tuberculosis even though being a common disease yet poses a problem for definitive diagnosis. More often than not the diagnosis is based on indirect evidence.

A child with TB often has vague general illhealth and failure to thrive. It may also have cough, which could be due to other diseases like repeated chest infections, viral infections, asthma, etc. all presenting as chronic cough. Similarly physiological enlargement of the lymphn-

odes may be misdiagnosed as tubercular.

BCG vaccination and its relationship to tuberculin positivity has been another area of confusion. There has been a tendency on the part of the clinicians to treat children with strongly positive tuberculin reaction, which is merely an index of infection. The degree of its positivity and local ulceration are no indication of an



NO BLOOD - JUST A COUGH



BLOOD!! THAT MUST BE TB.

active disease.

Treatment of Childhood Tuberculosis

Short course chemotherapy (SCC) in children has as yet not been fully evaluated. The existing data though encouraging has shown certain shortcomings like partial clearance of pulmonary lesion radiologically, or need for extended therapy in children with lymphnode TB.

The controversy regarding correct dose of INH (5mg/kg vs 10mg/kg) is still continuing. The newer studies have shown the lower dose to be as efficacious with advantage of lesser side effects. There is an increasing load of multi-drug resistance cases in children and the need for developing treatment modalities for such cases cannot be overlooked.

The parental attitudes towards the disease and its treatment are the major limiting factors in

completion of therapy. The rarity of the horrifying symptoms such as coughing out blood in children, delays the utilisation of proper health facilities.

National Tuberculosis Programme and Childhood Tuberculosis

Under the revised strategy of NTP there is a focused emphasis on the management of the sputum positive cases so as to decrease the pool of infectious cases as a strategy to decrease the tubercular transmission. This strategy, though very sound, doles out a poor deal to children as most of them cannot produce sputum. The short term therapy as planned under the programme for the tubercular lymphadenopathy may not be sufficient in the light of existing experience.

The various areas requiring special effort and operational

strategies as they emerge today for the control of childhood tuberculosis are:

- ◆ Study of prevalence and risk of infection in the country, particularly the base-line estimates in the areas of planned intensification.
- ◆ Estimates of prevalence and risk of infection in the underprivileged and vulnerable sections like urban slums.
- ◆ Increased emphasis on tuberculosis in the medical curriculum.
- ◆ Training and inservice orientation programmes.
- ◆ Evaluation of SCC and multi-drugformulations.
- ◆ Treatment modalities for drug resistance cases, and
- ◆ IEC to understand parental attitudes and knowledge and also to identify the barriers to treatment. □

TB Eradication Programme Ineffective

Set up way back in 1962 with the avowed mission of tackling and eradicating the dreaded tuberculosis disease, the National Tuberculosis programme (NTP) has not been able to reduce the number of fatalities or spread enough awareness about the killer.

The disease which claims about 500,000 lives annually in the country, is infecting about 12 to 13 million people each year.

Tuberculosis patients are ashamed to acknowledge that they have the disease. They hide the fact even from field health workers who knock on the doors to enquire if they manifest any of the signs which are sure indicators of TB. Sometimes even patients who have reached the blood sputum stage tend to conceal the disease for fear of being stigmatised by society.

"This means that the National Tuberculosis programme has not been effective enough in spreading awareness about the disease. Most people do not know that TB, if detected early can be cured totally. Social stigma is attached to the disease. People still treat TB patients like outcasts," says Dr. Bir Singh, associate professor of community medicine at the capital's prestigious All India Institute of Medical Sciences (AIIMS).

One major obstacle in tackling the disease is the high rate of defaulters, says Dr. Singh. Regularity of treatment is most essential for the cure.

Once diagnosed, four major drugs are

prescribed - INH (Isonicotinic Acid Hydrazide), Rifampicin, Streptomycin and Pyrazinamide. If taken in a combination together, the drugs helps to cure a majority of TB patients.

However, district or primary health centres do not have most of the prescribed drugs, leaving the patients with no other option but to purchase the expensive drugs from the open market. In most cases patients opt out of having to buy the drugs, says Dr. Singh.

Within the first three months of medication, patients feel a remarkable improvement in their health inducing them to become irregular with the medicines and some even tend to give it up altogether. This is very dangerous, says Dr. Ashok Rattan, who is with the microbiology department at AIIMS.

The bacteria which has not been eliminated in the patient reappears again and this time with a resistance to the drugs which were used to treat it. The patient, if not sputum negative is capable of spreading their disease to others, says Dr. Rattan.

Under the National Tuberculosis Programme (NTP) each district was meant to be self sufficient in tackling the disease. There are 390 Districts Tuberculosis Centres (DTC) in the country which are the nerve centres of the NTP.

The district centres have trained health workers and facilities to meet the objectives of the national tuberculosis programme which are: early detection of the disease, treatment of patients, to ensure that patients continue with

their medication, educate people through campaigns about the disease and its treatment, vaccination with the BCG vaccine and collecting data for research into the disease.

Primary health centres do all the field work necessary to carry out the objectives of the NTP through male multipurpose health workers who fan out into the rural and crowded urban areas to look for symptoms of the disease. Every patient detected with symptoms of the disease is referred to the primary health centre for sputum tests and medication. The district centres keep track of the patients and maintain all the data.

Though the NTP seems very well worked out on paper, the fact is that it is not as effective as it should be, says Dr. Rattan. If one keeps in mind that there are ten million TB patients in the country and with AIDS increasing its presence, it might take on dangerous proportions, feels Dr. Rattan.

One major reason for the NTP not being as effective as it should be is that the male multipurpose health workers are overworked, says Dr. Bir Singh. The priority areas demarcated for the field workers are family planning, mother and child nutrition, vaccinations and collecting data for research. With this load already on hand, it is not surprising that the tuberculosis programme is suffering, he says.

Source : Patriot, New Delhi, September 21, 1994.

Efficacy of The Revised National Tuberculosis Programme

Dr. Bharat Jhunjhunwala

Dr. Bharat Jhunjhunwala did his Ph.D. in economics from University of Florida in 1973. He taught at the Indian Institute of Management, Bangalore, from 1973 to 1979. In this period he lived in a slum for two years and was active in the Trade Union movement. He has been a freelance consultant since then.

TB Clinics were established in India in the First Five Year Plan itself. The Standard Regimen (SR) consisted of two month intensive treatment by inexpensive two/three drugs followed by ten month course of two drugs. The total cost of this treatment comes to about Rs.182.50 per patient.

In the 1980s it became possible to shorten this 12 months treatment to 6 months due to the development of powerful bactericidal drugs Rifampicin and Pyrazinamide. Also certain toxicity and reactions were observed in the inexpensive bacteriostatic drug Thiacetazone which was, therefore, replaced by the more expensive and less toxic Ethambutol.

These developments led to the introduction of Short Course Chemotherapy (SCC) which had a four drug regimen in the intensive phase of two months followed by two/three drugs in the 4 month follow-up phase. The SCC was further revised by increasing the quantity of drugs and reducing the frequency of intake from daily to alternate days. This regimen of a modified SCC is being tested in pilot areas as Revised National Tuberculosis Programme (RNTP). The drug cost of this treatment for new patients works out to be Rs. 837. There is a great variation between the drugs that are prescribed under the various regimens as well as their costing. However, we give our best estimates of the cost of treatment for new and old patients under the two regimens in Table 1.

A few things must be noted from the above discussion. First,

the intensive period under SR and SCC remains constant at 2 months. In both the treatments the patients turn Sputum negative after the intensive phase. The reduction in the length of treatment is essentially in the follow up phase which is reduced from 10 months to 4 months. This fact is significant because most of the default occurs immediately after the intensive phase (MHF 1994:23). Thereafter, a reduction of the duration of treatment by shortening of the follow up phase may or may not lead to a reduced rate of defaults.

The second point to note is that in case a defaulting patient comes back for the treatment, he is now treated with an additional drug so as to overcome the resistance that may have developed during the partial treatment taken earlier. Thus, under SR, where the initial treatment was with two drugs, the re-treatment is done with three

drugs. On the other hand, under SCC the initial treatment is done with four drugs and re-treatment with five. These five are virtually the only drugs available for ambulatory approach. Therefore, under SR, in the case of second and third default, one drug each can still be added on and the ambulatory treatment can continue. On the other hand, in case of second default in SCC no further ambulatory treatment is possible and the patients have to be hospitalised for more potent treatment.

Third, the drug cost under SR is Rs.182.50 for new patients and Rs.632.50 for old patients. This goes up to Rs.837 and Rs.1047 respectively under SCC. Mostly this is because of the persistent use of expensive bactericidal drugs Rifampicin, Pyrazinamide and Streptomycin and due to the replacement of inexpensive static

TABLE 1
Cost of Drug Regimen

	SR (Conventional Chemotherapy)	SCC (Short Course Chemotherapy)
New Patients		
Intensive	2 months	2 months
Follow-up	10 months	4 months
Cost per patient	Rs. 182.50	Rs. 837
Old Patients		
Intensive	2 months	2 months
Follow-up	10 months	4 months
Cost per patient	Rs. 632.50	Rs. 1047

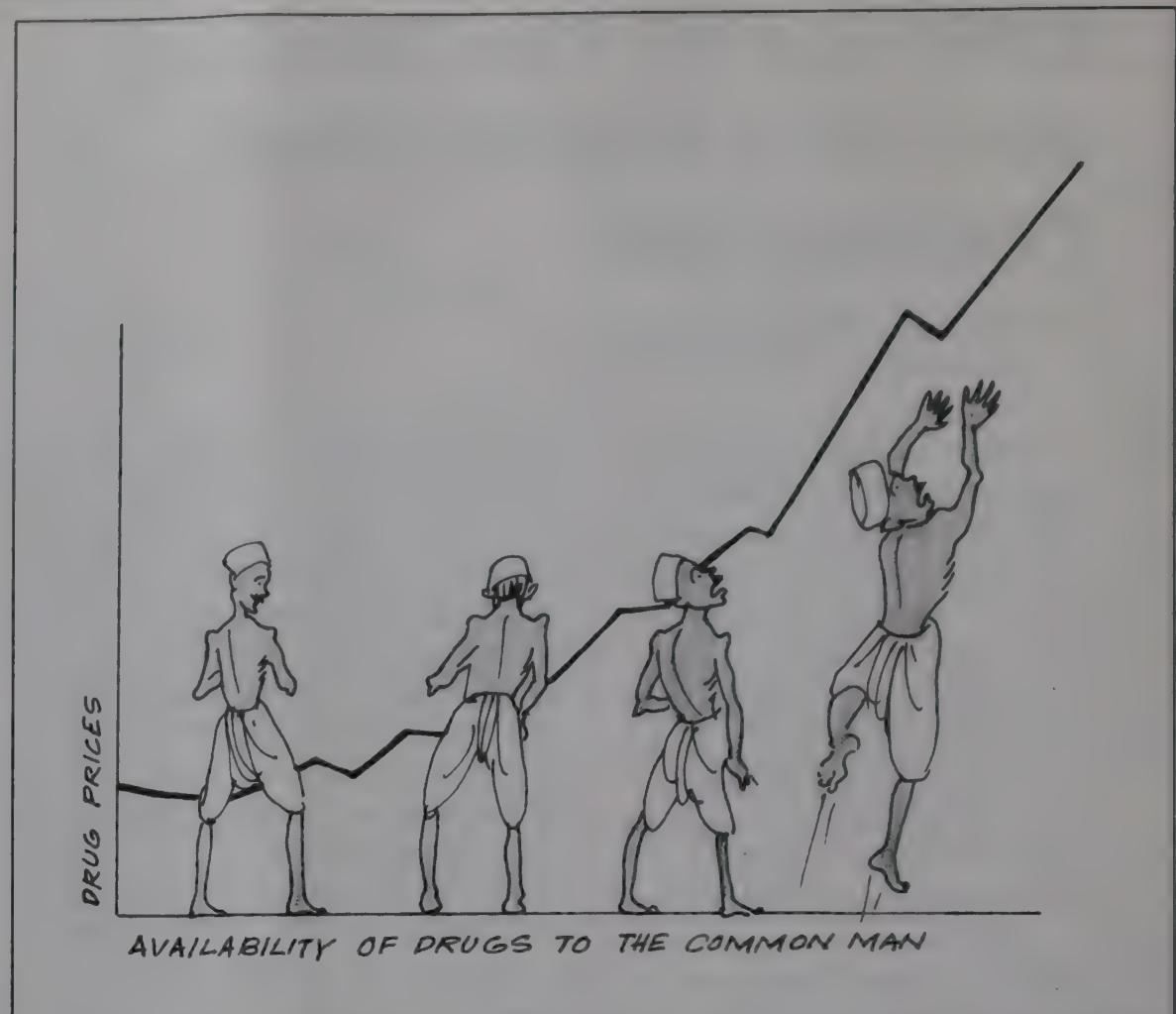
drug Thiacetazone by Ethambutol. It is acknowledged that Thiacetazone is more toxic but it has been well tolerated atleast in parts of India (WHO 1992 : 23).

The 1993-94 Annual Report of Ministry of Health and Family Welfare (MHF) mentions that a joint evaluation of the TB programme had been undertaken by the Government of India, WHO and SIDA; and RNTB had been evolved keeping the recommendations of this study in mind (referred to as WHO study in this paper). Accordingly, the RNTB strategy is being implemented on pilot basis in Delhi, Bombay and Mehsana with SIDA assistance. Further World Bank assistance has been obtained to implement RNTB in five States and six Metropolitan Cities covering about 20 percent of the population (MHF 1994 : 124).

The World Bank Position

Dr. Anthony R. Measham is the World Bank's Advisor on Health, Population and Nutrition in India. In a telephonic conversation he emphasised that the RNTB was an MHF programme hence the basic decisions and responsibility for the same lay with the MHF. He emphasised that the SCC regimens being recommended under RNTB were "cost effective and had enormous returns". He referred to an article on Tuberculosis by Murray, Styblo and Rouillon in a book edited by him as the basis of his statement regarding cost-effectiveness of SCC. Therefore, it is essential that one understands the logic of the Murray article for it, indeed, appears to lay forth the logic behind RNTB. Unfortunately the WHO study does not give cost comparisons for the SR and SCC. However, since the references do include two articles by Murray and one by Murray, Styblo and Rouillon, we may presume that their logic has been accepted by GOI, WHO and SIDA.

The Murray article compares the cost per year of life saved under



SR and SCC (referred to as Standard Chemotherapy and Short Course Chemotherapy respectively) both under hospitalised and ambulatory treatment for Malawi, Mozambique and Tanzania. For our purpose only the ambulatory treatment is relevant because both NTP and RNTB follow this approach. The relevant data is given in Table 2. It will be seen that

the cost saving is nil in the case of Mozambique and \$ 0.2 and \$ 0.1 per year of life saved in the case of Malawi and Tanzania respectively.

However, Murray goes on to conclude that SCC "is preferable (to SR) in virtually all stations". Then Murray presents a summary comparison of SR and SCC in his Table 11-14 which is reproduced exactly in Table 3. Here in the title

Table 2 (Vide Table 11-13 Of Murray)
Comparison of SR and SCC in 3 African Countries Cost per Year of Life Saved, 1989 US Dollars

Ambulatory			
Treatment	Malawi	Mozambique	Tanzania
SR	1.3	0.9	1.2
SCC	1.1	0.9	1.1
Cost Saving under SCC	0.2	Nil	0.1
Hospitalised Treatment			
SR	2.4	3.4	3.1
SCC	1.7	2.6	2.1
Cost saving under SCC	0.7	0.8	1.0

Table 3 (Vide Table 11-14 Of Murray)

Cost and Benefit of Short Course Chemotherapy and Standard Chemotherapy Based on National Tuberculosis Programmes of Malawi, Mozambique and Tanzania

Parameter	Standard Chemotherapy	Short Course Chemotherapy
Average incremental cost per year of life saved with hospitalisation (US Dollars)	3.00	2.00
Cure Rate (percent)	60	85
Percent of cases requiring Re-treatment	30	10

to the table he claims to compare SR and SCC. However, in the body of the table he chooses to present only the cost comparisons for hospitalisation and attempts to convey that the cost is \$2.00 per year of life saved under SCC against \$3.00 for SR in general. By suppressing the comparison for ambulatory treatment he has sought to convey that SCC is more cost-effective in all situations while actually, according to own calculations, if at all, SCC is cost effective only in hospitalised treatment which, incidentally, is not relevant for India at all.

It appears that this misrepresentation by Murray in a book copyrighted by the World Bank has been uncritically accepted and broadcast by MHF while there is little data to substantiate the same.

There are further problems with the assumptions made by Murray. Unfortunately, he does not give the actual calculations for arriving at the figures given in Table 2, therefore we shall restrict ourselves to the considerations of the assumptions made by him.

Rates of Default under SR and SCC

Murray gives estimates of patients failing therapy after two years of follow up as a function of months of Chemotherapy. He shows that if patients defaulted after two, four,

six, eight and 10 months respectively, then the failure after two years would be lower under SCC by 10-30 percent. The conclusion is that for default after a specified period, SCC "will have a higher total cure rate", as compared to SR (1993:249). It is implicitly assumed that default rate as a function of month's treatment will remain unchanged under SR and SCC. This assumption needs to be questioned. Unfortunately we do not appear to as yet have a systematic comparison of the default rate under SR and SCC. Whatever limited data on default was accessible to the author is set out below.

Dr.K.K.Datta, DDG incharge of NTP in MHF, this was because the symptoms of TB disappeared within 3 months. It follows that if the symptoms were to disappear earlier as under SCC, the default would also show an accelerating tendency. Therefore, Murray's implicit assumption that default rates over time would remain unchanged under SR and SCC needs to be questioned. Of course, if the default rate does show an accelerating tendency, the percent of failures as estimated by Murray under SCC will go up and its cost effectiveness will be eroded.

Cure Rate

Murray has estimated cure rates of 60 percent for SR and 85 percent for SCC (Table 3). Whatever limited comparative data is available in India does not appear to support such high cure rates. The NTI (1993:27) reports that under SR, 41 percent of the patients completed 12 months of treatment while under SCC 47 percent of the patients collected 75 percent dosages. The number of patients completing SCC would, therefore, have been lower than 47 percent, closer to the 41 percent for SR. Another comparison between six months and nine months

Table 4 (Vide Figure 11-10 Of Murray)
Failures After 2 Years Follow-up As A Function Of Months Of Treatment Received

Treatment	Treatment Received (Months)					
	2	4	6	8	10	12
SR	70	50	40	30	20	10
SCC	40	25	10	10	10	10
Lower Failure Under SCC	30	25	30	20	10	0

The annual report of New Delhi TB Centre, 1979 gives the cumulative default figures for the four quarters as 23.8%, 32.7%, 38.4% and 45.2%. This shows that more than 50 percent of the default occurs within the first three months. According to

Chemotherapy made by the British Thoracic Research Committee found that "there was no statistical difference between the regimens" where completion was concerned (NTI Bulletin 1993:29). Therefore, the claim of Murray that "there is clear consensus... that duration of

treatment adversely affects compliance" needs to be examined statistically in field conditions before being accepted. Needless to say, a lower cure rate under SCC will decisively alter the cost effectiveness in favour of the inexpensive SR.

Cost of Re-treatment

Murray has assumed that all the re-treatment will be undertaken under the five drug regimen as applicable under SCC (1993: Table 11-9). However, according to the WHO study, re-treatment can be undertaken by a three drug regimen (WHO 1992:52). Presumably this holds for the two drug SR. Thus the cost of re-treatment per patient under SR will be Rs.632.50 while presumably Murray has taken it to be Rs.1047 (see Table 1).

Drug Resistance

It appears that if a default occurs after taking a TB Drug for one month or more, the disease becomes resistant to that drug (Misreor 1986:18). Under SR the re-treatment is done by three drugs. In cases of subsequent defaults, an ambulatory treatment can still be continued with a multi-drug regimen by increasing number of drugs. However, under SCC, no ambulatory treatment is possible after all the five main drugs have already been administered during the first re-treatment. Therefore, under SCC, subsequent defaults would normally require hospitalisation. The costs of treatment of such subsequent defaults would be very high under SCC. This does not appear to have been accounted for by Murray as he speaks of only one re-treatment.

It should be clear that if the above four additional costs under SCC are incorporated in the calculations made by Murray, the ambulatory SCC over SR as per his own calculations turn into a much greater disadvantage. Therefore,

without further detailed cost calculations based upon our own statistical data, it would be incorrect to conclude that SCC is cost-effective compared to SR. Hence, RNTB based on the SCC regimen, should also not be considered to be cost-effective.

The MHF Position

The MHF annual reports appear to have repeatedly shied away from taking a forthright position on the efficacy of SCC. Perhaps this is because the cost-effectiveness of the same has not been established. It is useful to quote from these reports as they show how SCC has been introduced on a large scale under "Pilot" scheme for a long duration in large areas without any systematic assessment.

1983-84: "It is also proposed to introduce SCC drug regimens on a pilot basis in a few districts of the country to assess their efficacy under the existing field conditions..." (page 48).

1983-84: "SCC drug regimen has been introduced in eighteen selected districts all over the country on a pilot basis" (page 31).

1986-87: "...SCC drug regimens...were introduced on pilot study basis in 18 selected districts of the country. The result of detailed study is awaited. It has now been proposed to introduce (SCC) in 26 districts... during the current financial year" (page 31).

1991-92: "SCC drug regimens...have been introduced in 253 districts so far. More number of districts are expected to be brought under these regimens in a phased manner in the ensuing years" (page 32).

1992-93: "The SIDA authorities agreed to supply X-Ray units (etc.) for SCC pilot study" (page 135).

1993-94: "The drugs alone would cost around Rs.1500 per patient in the case of SCC... The cost of drugs alone...would amount to Rs.150 crores per annum... It is not considered practicable to avail

further enhanced outlays without external assistance... A proposal therefore, has been made for obtaining World Bank assistance for TB control project based on SCC. Pilot projects based upon this new strategy are proposed to be implemented in five states... The proposed pilot project has been initiated in three cities, viz., Gujarat, Delhi and Bombay (page 123-4).

It is clear from the above that in 253 districts SCC was continuing as a 'pilot study' as late as 1992-93. In 1992 the WHO study was completed. The evaluation recommended a continuation with SCC with a vastly improved administration. The recommendations were accepted. RNTB is based upon the SCC regimen. However, as we shall subsequently show, the implementation of administrative recommendations leave much to be desired. Therefore, it appears that as far as the SCC drug regimen is concerned, the World Bank has "established" its cost-effectiveness, the MHF has accepted the drug part of the WHO study and continued with the SCC regimen irrespective of whether the required administrative machinery is available or not. The commitment to continue with the SCC drug regimen remains intact.

The second argument for accepting the SCC regimen advanced by MHF is that there is a felt-need or demand from the patients for speedy cure. No one could lead to two opposing results. This is brought out by an evaluation of the Chinese TB programme: "We have seen how poorly managed and inadequately funded TB programmes can have a disastrous effect. If patients are not monitored properly, many become chronic carriers of drug-resistant strains of the disease" (Dakui 1993:25). It follows that the SCC regimen can lead to two entirely different results. If administered properly it may lead

to quick relief and increased cure which might possibly be acceptable even if cost-ineffective. However, if administered poorly it may lead to increased drug resistance and virulence of the TB bacteria. Therefore, it becomes essential that the administration be ensured first and then only the SCC regimen be introduced.

The prevalence of TB shows a natural decline with the improvement of per capita income (as it occurred in the USA in the first half of this century). This exerts a downward pull on the incidence of TB. Thus, left alone TB should show a declining tendency in India as well. In fact the decline should have been greater in view of the large number of patients cured under NTP under SR as well as SCC. But the incidence of TB does not show any declining tendency. The only conclusion is that the virulence of TB bacteria has increased, hence the increased number of infections is more than compensating the decline that might have been

occurring on its own.

As mentioned by Prof. Yin Dakui after his study on China's much touted TB programmes, poorly managed TB programmes can have a disastrous effect. Thus what appears to have been happening is that **the poorly administered NTP has cured less and infected more due to the increased virulence brought about by the defaulting patients.**

RNTP also uses high potency drugs under a SCC regimen with a poor organisational set up. The latter may lead to high default, which, in conjunction with high potency drugs will lead to increased virulence. Thus, the consequences are not likely to be favourable.

The logic behind RNTP appears to be simple. The Bank has convinced MHF about the cost-effectiveness of SCC on the basis of incorrect calculations. The MHF has borrowed from the World Bank and made sufficient provisions for the purchase of expensive drugs under this regimen while the organisational weakness have been

left unattended.

The beneficiaries, obviously, will be the drug companies. And, the cost will be increased virulence and incidence of TB due to the use of high potency drugs under a weak administrative system.

To build an alternative, first the organisational weaknesses of NTP must be removed and then only high potency drugs must be introduced. A simple calculation shows that an outlay of Rs.58 crores is sufficient to make available the SR drugs free of cost to 25 percent of all TB patients in India (85 crores population, 105% TB, 25% of assessed in a year @ Rs.182.50 per patient). What is required is to make available this SR treatment on a wide scale through private practitioners and PHCs with a strong IEC component to improve compliance. This will avoid the development of more virulent TB bacteria as would certainly occur under a poorly administered SCC regimen as being planned under RNTP.

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TB and AIDS

Dr. P. N. Sehgal

Dr. P. N. Sehgal is a former Director of National Institute of Communicable Diseases. Presently he is Consultant in VHAU. He looks after the HIV/AIDS programme.

Tuberculosis is a major public health problem in India and number one killer among diseases. The National Tuberculosis Survey which was conducted by the ICMR in the year 1955-58, revealed that 1.5 per cent of the total population above five years of age is estimated to be suffering from TB of the lungs (10 million as per 1981 census) of whom one fourth, i.e., 2.5 million are infectious. The annual infection rate of about 1.5% has remained almost constant for the last three decades. The problem of tuberculosis is not limited to urban areas but is prevalent in rural areas also.

Nearly 80 per cent of the people in our country live in about 6 lakh villages. It is estimated that atleast 2-3 sputum positive cases can be found in each village of the country, and nearly 10-12 persons would be suffering from radiologically active tuberculosis of the lung. In an average district with a population of 1.5 million, it is estimated that there will be about 5000 active pulmonary cases who are infectious and about 20,000 radiologically active pulmonary tuberculosis cases.

Recognising the need for political will and cooperation among private and public agencies in the fight against TB, the Advisory Board of WHO/TB programme has recently declared TB as a global public health emergency (1). Lack of adequate funds could not alone be held responsible for our inability to control TB so far. What had been missing in this instance, as with other health concerns, were commitment from the highest

political level and accountability of performance of those responsible for the disease control.

Pandemic of AIDS

The pandemic of Acquired Immunodeficiency Syndrome (AIDS) sweeping the world cuts across the conventional boundaries of nationality, sex and age. HIV the Human Immunodeficiency Virus, which causes AIDS, has infected millions of women, men and children in developed as well as developing countries. Taking into account under diagnosis, under reporting and delay in reporting, WHO estimates that more than one million adult full blown AIDS cases may have occurred worldwide since the beginning of the pandemic in 1981.

In early 1994, according to GPA estimates around 13 million women, men and children are living with HIV and AIDS worldwide, in 1993, about 700,000 children were born to HIV positive women in Africa alone.

Predictions for HIV carriers by 2000 AD cover 40 million people with a quarter of this number likely to suffer from full blown AIDS. Ninety percent of these cases will be in developing countries and ten million or more will be children born with HIV infection.

Magnitude of AIDS/HIV Infection in India

The first AIDS case in India was reported in May 1986, since then 728 cases of AIDS and 15325 cases of HIV infection have been reported from 24 States/Union Territories of the country, upto 31st May 1994.

It has been estimated that if the transmission of HIV continues at the same rate, by the year 2000 AD about 5 million persons would have been affected in India and the number of AIDS cases would exceed one million.

The break up of the sero positive cases detected by the National AIDS Control Organisation (upto 31st March 1994) showed 43.54% were heterosexually promiscuous, 15.96% blood donors, 13.29% 1/4 drug users, i.e., about 3/4th of HIV positive cases were adults and majority of them youth (2).

HIV infection and Tuberculosis

Infection with HIV is the greatest risk factor for tuberculosis. Tuberculosis in an infected HIV individual can occur due to:

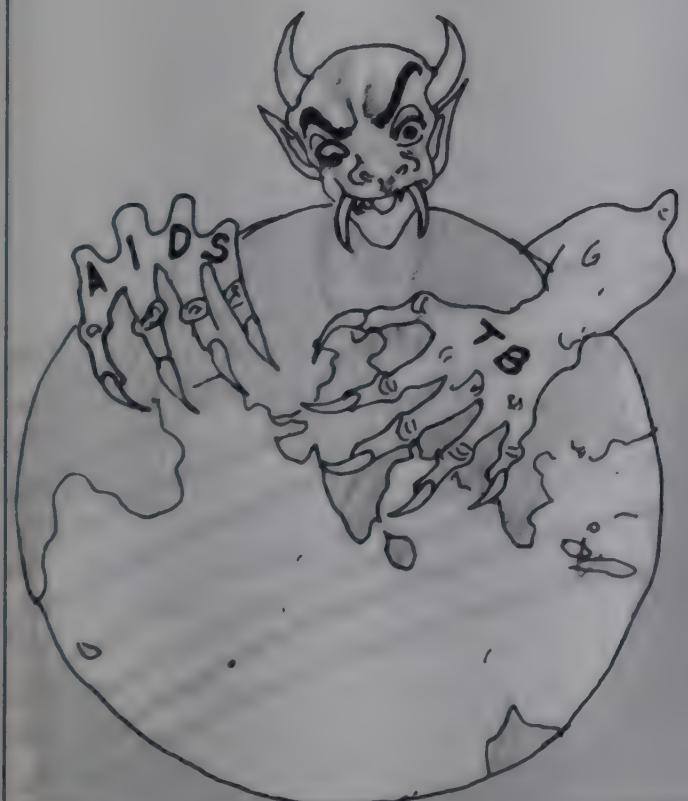
- ◆ multiplication of tubercle bacilli in quiescent foci,
- ◆ progression of revert infection to disease, and
- ◆ superinfection.

The impact of HIV infection on tuberculosis depends mainly on the prevalence of HIV and tuberculosis in the community. Reliable information on the levels and trends of HIV infection among the general population in various countries is not readily available but information on AIDS is available. In the past five years the incidence of tuberculosis has more than doubled in certain countries where HIV is epidemic. It has been estimated that 30-70% of tuberculosis patients in these countries are HIV positive. (4) This has placed an enormous burden on their general health services.

particularly hospitals. However, efficient national health tuberculosis programmes can still effectively cure tuberculosis in HIV positive patients and control the spread of the disease, even in the face of HIV pandemic.

TB AND AIDS: A FATAL COMBINATION (5)

- ◆ One-third of the world's population has already been infected with TB. If these individuals contract HIV infection, it dramatically shortens their lives by causing an acute case of TB to erupt from their previously harmless infection.
- ◆ For someone who does not have a TB infection, but has contracted HIV, exposure to the TB germ can be devastating. These patients often die within weeks.
- ◆ A healthy person who has been TB-infected has less than 10% lifetime chance of developing tuberculosis. An HIV-infected person who is also infected with TB has up to a 10% chance each year of developing a life threatening case of TB.



- ◆ Tragic as the AIDS/TB combination is for its victims, the TB germ is an airborne risk for the community. The only protection for the community is a fast, complete cure for TB patients.

Emergence of the new, HIV associated tuberculosis in the developed countries has directed global attention to this pestilence of poor people in the developing countries. At a recent conference in London (*Lancet*, 341:1145, 1993) Prof. Keith McAdam mentioned 10 commitments which are required to control tuberculosis (1):

- ◆ National TB control programmes have to give affordable treatment with adequate management structures.
- ◆ Faster diagnosis should include active case finding and subsidy of PCR kits for the developing world.
- ◆ Education, supervised regimens, incentives, encouragement and empowerment will increase patient's compliance.
- ◆ Proper drug supplies, quality control, and new ways of supervising regimens will help programmes to comply.
- ◆ Education should be targeted, both to influential groups such as politicians, traditional healers, shopkeepers and pharmacies, teachers and pastors and to groups at high risk.
- ◆ A commitment to new drug development is a challenge to the pharmaceutical industry to forge new partnerships with centres of excellence.
- ◆ Intervention among HIV-positive individuals must be appropriate

in terms of education, prevention of transmission (of HIV), slowing the progression to AIDS, and reducing TB cofactors.

- ◆ A new TB vaccine, which might be protective or therapeutic, or even a polyvaccine, is required, although even the mechanism of protective immunity needs more study.
- ◆ Political partnership is essential.
- ◆ Last but not the least, is the fight against poverty.

The WHO experts recommend that a patient with AIDS who has tuberculosis should be treated with Short Course Chemotherapy (SCC) just like any other tuberculosis patient. If that patient needs to be isolated because of likelihood of the tuberculosis spreading to other patients, the decision to do so should be based on the clinical presentation and not on the HIV status. (6)

Poverty is indeed an important cofactor of the double trouble - tuberculosis and HIV. The issue before us is whether our doctors, health care managers, policy makers and politicians are prepared to recognize that these dangerous partners in crime are gaining immense ground? Indeed, they will become formidable if meaningful preventive measures are not taken in time.

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Silicosis and Tuberculosis

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Silicosis is the most ancient and commonest of all occupational diseases and claims larger number of lives than any other occupational disease. Even today, it continues to be among the most serious occupational diseases. The crystalline free silica, the agent responsible for the causation of silicosis, is one of the most powerful fibrogenic matter found in Nature. It forms about 12% of the earth's crust and is next only to feldspar in abundance. Mining and tunnelling are, therefore, occupations most closely related to the hazards of silica exposure. The sand stone industry, cement industry, quarrying, the granite industry, slate quarrying and dressing, grinding of metals, iron and steel foundries, silica milling, flint crushing and the manufacture of abrasive soaps and glass also involves occupations which may lead to silicosis. Some of the lesser known occupations which are important from hazard point of view and peculiar to India and some other developing nations are slate pencil cutting, agate polishing, etc. In India there are about 1.7 million workers engaged in mining of various minerals, iron and steel industries, cement industry, manufacturing of glass, foundries, quarries, etc. All these industries involve potential risk of exposure to siliceous dust and subsequent development of silicosis.

Amongst all the atmospheric contaminants encountered in industry, free silica has the dubious distinction of being the only dust which predisposes significantly to the development of tuberculosis. The occurrence of

silicosis and tuberculosis together is known as '*silico-tuberculosis*'. Susceptibility of silicotic patients to tuberculous infection has been established since the beginning of this century. The potentiating effect of free silica on tuberculosis was experimentally proved by L. W. Gardener in 1929. He also produced an experimental evidence that in the presence of quartz, even normal nonpathogenic strains of mycobacteria, could produce tuberculosis. Later experimental studies and field investigations have confirmed that the atypical mycobacteria like *myco.*, *Avium* and *myco.*, *Kansasii*, are frequently responsible for tuberculous infection in silicotic patients. These atypical mycobacteria are poorly sensitive to most of the anti-tubercular drugs and therefore, the prognosis in these cases is poor.

The prevalence of tuberculosis has direct relationship with the concentration of free silica dust in the work environment. The incidence of tuberculosis increases with the severity of silicosis. High prevalence of tuberculosis has been reported from the industries involving potential risk of silica exposure.

Magnitude of the Problem

Precise data on industry wise incidence of silicosis and tuberculosis are not available. However, there are strong reasons, from some of the survey works, to believe that the incidence of these diseases is very high in many industries. The problem of these diseases is more severe in small scale and cottage industries

because of certain characteristic features of these industries. Most of these units are run by small entrepreneurs with limited financial resources and inadequate technical know how. The labour forces are unorganised and lack the ability of collective representation against exploitation like long hours of work, low wages, unchecked work place hazards etc. Medical facilities are usually non-existent. Due to high labour turnover and absence of periodical medical examinations, cases of chronic diseases like silicosis and tuberculosis usually pass unnoticed. To make the situation worse, most of these units are beyond the purview of level provisions like Factories Act and ESI Act which are aimed at safeguarding health, safety and welfare of the industrial workers.

In Table 1 the findings of the author as regards the prevalence of silicosis and tuberculosis in some of the small scale and cottage industries industries have been summarised. The industrial hygiene study in the industries mentioned in Table 1, showed the dust levels several times higher than the prescribed threshold limit value (TLV). It is seen from Table 1 that the prevalence of silicosis and tuberculosis were very high.

The prevalence of tuberculosis varied from 15% to 34.8%. In the slate pencil industry, despite very high prevalence of silicosis, the prevalence of tuberculosis was lower than that in other industries. In this industry, highest levels of silica dust were found and the follow up examination of workers showed rapid progression of the

Table 1

Prevalence of Silicosis and Tuberculosis in Small Scale and Cottage Industries

Industry	Silicosis No (%)	Tuberculosis No (%)
Slate Pencil Cutting (n=593)	324 (54.7)	89 (15.0)
Ceramic Industry (n=292)	44 (15.1)	44 (15.1)
Agate Grinding & Polishing (n=468)	136 (29.1)	131 (30.1)
Stone Cutting (n=89)	17 (19.1)	31 (34.8)

disease resulting in high mortality in relatively short duration. It is quite likely that many workers suffering from silicosis might have succumbed to the disease before developing tubercular infection. On the other hand, it is also likely that many cases of tuberculosis in silicotic patients is relatively difficult because the silicotic lesions may be indistinguishable from the tuberculosis on radiographic examination.

The data on relationship between severity of silicosis and occurrence of tuberculosis in slate pencil cutting industry and ceramic

industry have been pooled and presented in Table 2. It is evident from the table that the prevalence of tuberculosis increases with increase in the severity of silicosis.

Clinical Features

It is important to emphasise that there may be no symptoms even though the radiographic appearances may suggest fairly advanced silicosis. Dyspnoea (difficult breathing) on exertion is considered to be the most frequent and directly related symptom of silicosis. The severity dyspnoea increases with progress of the disease. In the absence of complicating disease (e.g. tuberculosis), it is rarely complained of at rest. Slight unproductive cough is complained at the initial stages, later on the quantity of sputum increases. The symptom complex may resemble chronic bronchitis. Excessive sputum production is due to

Table 2

Prevalence of Tuberculosis according to Severity of Silicosis

Severity of Silicosis	Number of cases	Tuberculosis
Category 0	517	44 (8.51)
Category 1	161	24 (14.91)
Category 2	145	35 (24.14)
Category 3	62	25 (40.32)

bronchial catarrh brought about by chronic dust exposure and sometimes it is due to secondary bacterial infection of the devitalised lungs. Chest pain and haemoptysis (blood in sputum) indicate possibility of complication like tuberculosis.

Chest Radiography

Chest radiography is the most important tool for the diagnosis of silicosis. There appears clear relationship between total dust exposure and severity of radiographic changes. In the initial stage, there is 'reticulation' of lung fields due to thickening of perivascular and inter-communicating lymphatics. The radiographic diagnosis of silicosis can be made with some degree of certainty only after the appearance



of nodules. The silicotic nodules are 2-5 mm in diameter, homogenous density and usually cover most parts of the lungs. Sometimes the silicotic nodules unite and form 'conglomerate shadows'. These conglomerate shadows are sometimes described as progressive massive fibrosis (PMF), indicating the future course of disease.

Sputum Examination of Tuberle Bacilli

Surest method of establishing diagnosis of pulmonary tuberculosis is the demonstration of bacilli in sputum. However, the recovery of tubercle bacilli in the sputum of patients suffering from silico-tuberculosis is difficult. This is because of "walling in" of tubercle foci by silicotic fibrosis which prevents the discharge of tubercle bacilli in the sputum. Large number of cases of tuberculosis remain undiagnosed during life is evidenced from the fact that very high prevalence of tuberculosis is usually observed in post mortem study of industrial population occupationally exposed to high levels of silica.

Differential Diagnosis between Silicosis and Tuberculosis

For the diagnosis of silicosis, satisfactory occupational history of silica exposure is most important. Occurrence of silicosis in the absence of occupational exposure is rare. Radiologically, silicosis and miliary tuberculosis closely resemble each other, however, miliary tuberculosis in adults is rare and the patient is toxæmic. The nodules in miliary tuberculosis whether small or large, are less than those of silicosis. The radiographs of silicosis usually show increased translucency as against general loss of translucency in tuberculosis. In general, the severity of symptoms in a patient suffering from simple nodular silicosis is much less as compared to the one suffering from miliary tuberculosis. The distinction

between adult type (post-primary) tuberculosis and conglomerate (PMF) radiological shadows is sometimes very difficult. However, the conglomerate shadows of silicosis do not show cavitation. Associated complications like pleural effusion and distortion of the intra-thoracic organs due to fibrosis are usually not observed in conglomerate shadows.

Prevention and Control of Silicosis and Silico-tuberculosis

There is need for planning National strategy for the prevention and control of silicosis and silico-tuberculosis. Countrywide silico-tuberculosis control should consist of two major components:

- ◆ Definition of magnitude of the problem at national level and
- ◆ Implementation of actual control measures.

Definition of Magnitude of the Problem at National level

To plan and execute the national strategy for the prevention of silico-tuberculosis the knowledge of total population at risk and number of people already affected is very essential. The population at risk of silicosis can be roughly estimated on the basis of available information on industries, their location, raw material and industrial process and employment in each of them. This should be followed by comprehensive industrial hygiene and epidemiological surveys in sample population. After estimation of population at risk and identification of more vulnerable groups, the industrial and medical surveys should be carried out. The industrial hygiene survey shall include measurement of "total" and "respirable" dust at work places and the qualitative analysis of dust samples.

The tools of epidemiological survey are recording of occupational history, clinical history and physical examination, chest radiograph, sputum

examination and spirometry. Chest radiography is the most important single investigation having a high degree of specificity but relatively low sensitivity. The history and physical examinations help in excluding other respiratory diseases. The spirometry may help in appraisal of the functional loss. The results of the sample surveys will help in identifying the thrust areas. The thrust areas may be defined on the basis of number of people at risk and the severity of hazard. Industries having moderate risk but employing a large work population, e.g., the mines, or highly hazardous industries employing smaller number of workers e.g. slate pencil industry, agate industry, quartz grinding industry etc., fall in this category. For the reasons already mentioned, there is a special need for looking into the problems of small scale and cottage industries.

Implementation of Actual Control Measures

The process of the control of silicosis consists of:

- ◆ Dust control measures, and
- ◆ Medical measures.

Dust Control Measures: There is no silicosis without dust exposure, and the dust levels in work environment correlate well with incidence of severity of the disease. Therefore, elimination or suppression of dust in the work environment is the key in control of silicosis. Each industry has its unique work process and, therefore, it is not possible to have a single prescription appropriate to all. The general principles of dust control measures include substitution of more hazardous substances with innocuous one, isolation and enclosure of the sources of dust, use of wet methods wherever possible, application of local and general exhaust, humidification of work environment etc. Frequently, the management is found to share the

misconception of laymen that the supply of dust mask is sufficient for the prevention of dust related occupational diseases in the industry. The personal protective equipments such as masks should be prescribed only when all available methods of dust control measures have failed. In fact, the dust masks are of little value when the dust concentrations are too high for the dust particles will soon clog the pores in the filter resulting in a choking sensation and discontinuance of the use of masks by workers. Moreover, the masks are not suited for hot and humid climate.

Medical Surveillance: As per the

recommendation of WHO, the medical screening programme should be integrated and pursued with the **environmental surveillance programmes** so that the results of both could be related to reviews of measures taken to control the environment. The medical examination is necessary because perfect knowledge does not exist as to the safe level of exposure. Medical surveillance should be continued, not as control method, but to verify the adequacy of dust control measures. The medical measures for the control of silicosis and silico-tuberculosis include pre-employment and periodical examinations, incorporating chest X-ray, sputum

examination for tubercle bacilli and spirometry. The pre-employment medical examination will provide the base-line data for each individual. The periodical medical examinations shall aim at early detection of cases of silicosis and tuberculosis. The success of the prevention programme will largely depend upon the active co-operation of the workers at risk. Therefore, the need for health education of the workers cannot be over emphasised.

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Tackle AIDS, TB Jointly

Experts on AIDS and Tuberculosis demanded a close collaboration between programmes against the two diseases which "act in tandem".

Clinical and surveillance studies show that tuberculosis is the most important life threatening opportunistic infection amongst people with compromised resistance as a result of HIV infection rates in India among those with confirmed AIDS as high as 83 per cent.

Tuberculosis has now re-emerged as an unprecedented medical, social and economic threat globally, calling for efficient management of the disease with short course chemotherapy, said Dr. Jai Narain, team leader of the WHO global programme on AIDS.

Dr. Narain was speaking at the national conference on AIDS, here organised by the Government of Delhi,

the Heart Care Foundation of India (HCFI), the Indian Medical Association, New Delhi branch (IMANDB) with technical collaboration from the WHO and the National AIDS Control Organisation (NACO).

The diagnosis of HIV associated tuberculosis presents a unique challenge because the disease is often difficult to diagnose although it can be effectively treated, panelists discussing Dr. Narain's presentation said.

Tuberculosis was already a serious problem in India with 1.5 million new cases being reported annually and the country responsible for fifty per cent of incidence worldwide.

With HIV reliably known to be circulating among the general public rather than being confined to high risk groups such as sex-workers and homosexuals, the country is on the brink of a tuberculosis

epidemic, according to projections.

Unless effectively cured, a tuberculosis patient, whether suffering from HIV or not, becomes a potential carrier for a disease which spreads rapidly, doctors at the conference warned.

The HIV pandemic can worsen the tuberculosis situation in developing countries by reactivating latent bacilli in infected patients, and by new infections with the bacilli.

An added problem was the emergence of multiple drug resistant tuberculosis strains calling for a global programme to develop new drugs, Dr. Narain said, adding that more efficient use could also be made of available drugs.

Source: Nagpur Times, Nagpur, November 24, 1994.

Problems in the Control of Tuberculosis Today

Dr. Christopher is with the Christian Health Association of India, Secunderabad.

Dr. Christopher

In my close association with the tuberculosis(TB) patients and the TB control programme during the past 22 years, my experience is that more we diagnose and treat the cases, the number of new patients are increasing year by year instead of decreasing. It clearly shows that definite efforts are not made to control the disease as other controlled diseases. As I reflect on it, I find that the reasons are many:

◆ Lack of Definite Plan and Policy

First and foremost reason is that no serious effort is made on the part of the government or NGO's to control the disease. As I had discussed this problem with some concerned authorities, I got the impression that there is a tendency, only to make the sputum positive patient into non-infectious patients, so that he may not be a threat to the society and not for his

total healing and development. There is not much planned programme for his/her treatment, economic development and rehabilitation. Regarding the treatment, it is mostly curative in nature and that too does not give much desired results due to various reasons. Very little is done for the control and prevention of the disease.

◆ Ignorance

Majority of the people in our country are ignorant of the causes of TB, or how it is spread or about the treatment or how it can be prevented. Subsequently, the relatives and neighbours as well as others who come in contact with sputum positive cases, get infected and the number of such cases is increasing year by year. I have seen such families where one person was infected first, and later all the other members became the victims

of TB.

◆ Irregular Treatment

Due to various reasons, many patients, do not complete the course of the treatment. The following are some of the reasons:

◆ After about three months treatment, the patient is relieved from the distress symptoms and s/he feels better. Because of the ignorance of the nature of the disease, s/he stops by herself/himself the treatment, which will recur shortly and again s/he has to seek medical assistance.

◆ High cost of drugs: The TB drugs are very costly. No ordinary person can afford such costly drugs for a long period of treatment. Incidentally, majority of the patients are very poor, even



Irregular Treatment

though the TB bacilli is no respector of caste, creed, sex or class.

- ♦ Lack of free supply of drugs: Generally patients do not get the free supply of the second line drugs regularly from the government hospitals. Even the NGOs - recognised treatment centres by the government, do not receive Rifampicin or Pyrazinamide and receive only Ethambutol occasionally. Our centre was recognised by the government in 1983. Since, then we received regularly adequate supply of INH and Thiacetazone injection. Streptomycin only for sputum positive cases and that too, only when it is available. From 1983 onwards we received only 3400 vials of injection Streptomycin. Many patients do not show sputum positivity but their X-ray will be showing the presence of TB. For the speedy relief of symptoms the medical officers do prescribe injection Streptomycin for such cases. During the said period, we also received Ethambutol - 200 mg - 6000 tablets, / 400 mg - 5000 tablets and 800 mg - 3000 tablets. During this period 920 patients were treated in the centre. This is the same with the other centres like St. Ann's Hospital, Vijayawada where a large number of patients are given domiciliary treatment. In such conditions the NGO's may not be in a position to supply freely the required drugs or the patients may not be able to buy them.
- ♦ Additional expenses on drugs: Additional expenses incurred for the treatment of patients admitted with haemoptysis, respiratory problems and other secondary infections are high and the patients as well as the NGOs find it difficult to meet the expenses.
- ♦ Long duration of treatment with first line drugs: In the

long duration of treatment with first line drugs, i.e., INH and Thiacetazone, many patients stop the treatment before completing the course. Severe skin reaction to Thiacetazone is common.

Nobody would like to take medicines for a long time. As the medical science has advanced in treating the TB with Short Course Chemotherapy (SCC). Government should make a policy of providing SCC to all the patients who require it. They should allot funds for it, which in turn will pay rich dividends in the future. Thus the patients will be cured early and become non-infectious.

At present very little money is allocated for health in the budget by the government. Major part of it goes for the salaries, equipments and drugs of the city hospitals and out of it I suppose a part is spent for the TB control programme also. It is not sufficient. Government should bring down the cost of the anti-tuberculosis drugs. The health of the nation depends on its healthy people. Can the TB patients who are poor contribute to the society, when their very existence is at stake? They are only a liability to the society. Every one has the right to live in dignity and our Constitution guarantees that. So there should be good planning, better provision of funds and personnel for the control of TB in our country.

- ♦ One is not born with TB. Majority of the TB patients are very poor. If s/he is a victim of tuberculosis today, it is because s/he happens to be in a society where injustice, ignorance and poverty are rampant. Even though it is said the regular intake of drugs are sufficient to cure TB with whatever food they usually take; all of us know how poorly

they are nourished. It is common knowledge that people should have balanced food to maintain good general health. Then there are TB patients who cannot work and earn for themselves and their families, and the meagre income, that they earn, is not enough to buy even a good meal. So it is not logical to say that regular intake of drugs alone is sufficient to cure TB, with whatever food they take. Everybody knows it is a wasting disease and how much protein, vitamins and minerals are needed. Often their food consists of rice, pickle, or rasam or little vegetable. Even the "poor man's meat" — dal, is beyond their reach. How can they get cured? Often patients are not able to tolerate drugs as they are very weak. Because of the above reasons, poor TB patients should be given diet assistance during the period of their treatment. It will also motivate them to complete the treatment.

- ♦ Dietary Habits: Because of the dietary habits patients also do not make use of the locally available food resources. For instance, in and around Nunna, there are a number of poultry farms. But the patients as well as the people in general think these "foreign eggs" are not good and they will not eat them but the same eggs are sold in the markets of Madras and Calcutta with a high cost of Rs. 1.50 or Rs. 1.75 per egg, whereas here it is available for 60 Np or 80 Np. Instead they prefer eggs from the country fowl which costs Rs. 1.50 or more and is often not available. They do not eat vegetables like brinjal, green leaves like drumstick leaves or gongura which are easily available during this sickness. So there is an urgent need of more health personnel to give health and nutrition awareness.

- ♦ Not detecting the cases early: Often the disease is not diagnosed in the early stage. The patient goes from one doctor to another to seek relief of her/his symptoms which may disappear with antibiotics but recur after some time. Then s/he goes to another doctor, that doctor too gives her/him symptomatic treatment. Sometimes RMPs tell the patient to take anti-TB drugs only for two weeks or for one month or take 15 injections of Inj. Streptomycin etc. So the patient does not get proper treatment, and precious time is lost in diagnosing and treating the case. Also they develop resistant bacilli due to this type of irregular treatment.
- ♦ Non-acceptance: Many TB patients are not accepted by their own relatives and they are thrown out of their homes. They do not care to look after them or give them food. They send them away without any money and they have to beg for their survival. So, it is an urgent need to plan effectively for the control of TB. Since TB patients who need hospitalisation are not admitted in the general hospitals, it is difficult for them to go to a distant TB centre where they are admitted. Often there will not be anybody to

- stay with them, due to the emergence of nuclear families.
- ♦ Personnel: It is difficult to get sweepers, nurses and doctors to work in the TB ward.

Rehabilitation

The TB patients after their treatment, may not be able to do the previous job. Rehabilitation is very important.

Suggestions

- ♦ There should be firm determination on the part of the government to control TB by making definite policy, planning and its implementation.
- ♦ Free supply of all the TB drugs to NGOs, and reducing the cost of the TB drugs by the government. Also availability of the TB drugs in the government hospitals.
- ♦ Awareness by mass communication media like TV, Radio etc., that one should not stop the treatment when the symptoms subside, but complete the full course of treatment.
- ♦ Putting the patients on SCC and switch on to first line drugs if necessary later.
- ♦ Diet allowance for the TB patients till the treatment is over, for the optimum period. To motivate them to complete the course.
- ♦ The local government should

take the responsibility of controlling the disease in their respective areas by giving health awareness and local support to the patients to tide over the difficult period. This can be done by pooling the resources of the community and government.

- ♦ The patients who are able to do some work should be rehabilitated through some income generative scheme.
- ♦ Give full support to TB patients to live in full human dignity as guaranteed by our Constitution.
- ♦ Provide more facilities for admission and free treatment for the seriously ill patients (TB).
- ♦ Appoint adequate personnel in TB control programme to provide health education and supervise the domiciliary treatment.
- ♦ Adequate budgeting for the TB control programme by the government.
- ♦ Inservice education to RMPs etc., to provide proper treatment.
- ♦ Free diagnostic facilities closer to their homes.
- ♦ VHAI and CHAI and other voluntary organisations should take up the cause of TB patients with Central and State Governments.
- ♦ Large number of AIDS patients are victims of TB, it is all the more important to take effective steps to control TB.

Chemotherapy effective for TB

have untreated form of Pulmonary Tuberculosis.

It is imperative that the infection in children is diagnosed and treatment given in early stages to avoid permanent disability. Inadequately treated pulmonary infection could be reactivated during adult life.

Dr. Satyavati said reinfection could also occur due to high prevalence of open cases of tuberculosis though children are protected by BCG vaccination through the universal immunisation programme.

She said it is important that transmission of tuberculosis is halted by strengthening the existing infrastructure of the National Tuberculosis Control Programme.

The diagnosis of the disease is dependent on tracing of case contacts and supportive tests like tuberculin skin test, she said and added there is new hope of fighting the disease due to availability of new serological diagnostic techniques like Elisa and polymerase chain reaction as well as improved bacteriological techniques like the Bactec method.

She said diagnosis and treatment of tuberculosis in children are fraught with difficulties as the disease is asymptomatic. The non-availability of sputum also made confirmation of the disease difficult.

Dr. Satyavati said with the advent of HIV infection (AIDS), children born to mothers with HIV infection could acquire infection neonatally or perinatally and ran the risk of contracting tuberculosis from contact with untreated or inadequately treated cases of Pulmonary Tuberculosis.

She said Pulmonary Tuberculosis, superficial lymph node tuberculosis, skeletal tuberculosis, perinatal tuberculosis, military tuberculosis and tuberculous meningitis were the multiple manifestations of tuberculosis in children.

Children under four years of age ran greater risk of tuberculosis meningitis and military tuberculosis associated with high mortality and morbidity.

Source: *Madhya Pradesh Chronicle, Bhopal, December 6, 1994.*

Effective treatment of childhood tuberculosis is possible with Short Course Chemotherapy (SCC) involving three or four bactericidal and sterilizing anti-tuberculosis drugs, Indian Council of Medical Research (ICMR) Director General Dr. GV Satyavati said on Monday, reports UNI.

Delivering the keynote address at a symposium on 'Childhood Tuberculosis' organised by the Tuberculosis Research Centre, the ICMR and the Tamil Nadu chapter of the Indian Academy of Pediatrics, she said the efficacy of chemotherapy on children depends on good drugs-compliance, including correct dosage on the basis of body weight as in the case of adults.

Most physicians even in metropolitan cities have no idea of the modern concept of chemotherapy of tuberculosis even for adults, not to mention children, she added.

She said children are affected by tuberculosis due to prolonged and close contact with adults who

Socio-Cultural Dimensions of Tuberculosis

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Dr. S. N. Nikhil

Social and cultural dimensions of Tuberculosis are of paramount importance from the management point of view. Therefore, if the existing system of managing the National Tuberculosis Programme (NTP) does not accord appropriate significance to the social and cultural dimension, it would be difficult to change the over all behaviour of the Tuberculosis patient. Infact cases of relapse, dropout and irregularity in completing the prescribed treatment, are part of behavioural matrix of Tuberculosis patient. These behaviours are exhibited on

account of the socio-cultural environment in which they (patients) live. Presented are a few case-studies of the tuberculosis patients to substantiate the fact stated above.

Case No. 1

Seventy year old Ram Nath, a high caste Hindu is a retired electrician from a government factory. He is unmarried and has no one to look after him. Before acquiring TB, Ram Nath was just like any other normal person discharging his duties efficiently. He had to go for field work most of the time and that

also for eight hours a day. Ram Nath, who was semi-educated was leading quite a peaceful life contented with whatever meagre salary he could draw. He could just manage two square meals throughout his life and there was no question of savings. However, his living condition was quite satisfactory: cemented house of two rooms, well ventilated with no dearth of sunlight and good sanitation. There was no room for tubercular bacilli to grow. Poor Ram Nath was unaware about TB before he acquired it himself.

In early 1986, he found himself



in the grip of high fever most of the time. It was not accompanied by cough, expectoration or chest pain — the usual symptoms of TB. He could easily have dismissed it as viral or malarial fever, had it not continued for several days making him approach Central Government Health Scheme (CGHS) dispensary, where after several tests like X-ray, ESR (Blood test), the doctor ultimately declared it to be a case of tuberculosis and referred him to TB Hospital. This is how he reached the TB Hospital which is hardly 5 km from his residence in R.K. Puram (South Delhi). It was really surprising that inspite of good living conditions, no contact with any TB patient, Ram Nath became a TB patient. Though apparently there were no factors responsible for the transmission of the disease, one can never say when and where the tuberculosis invades the body.

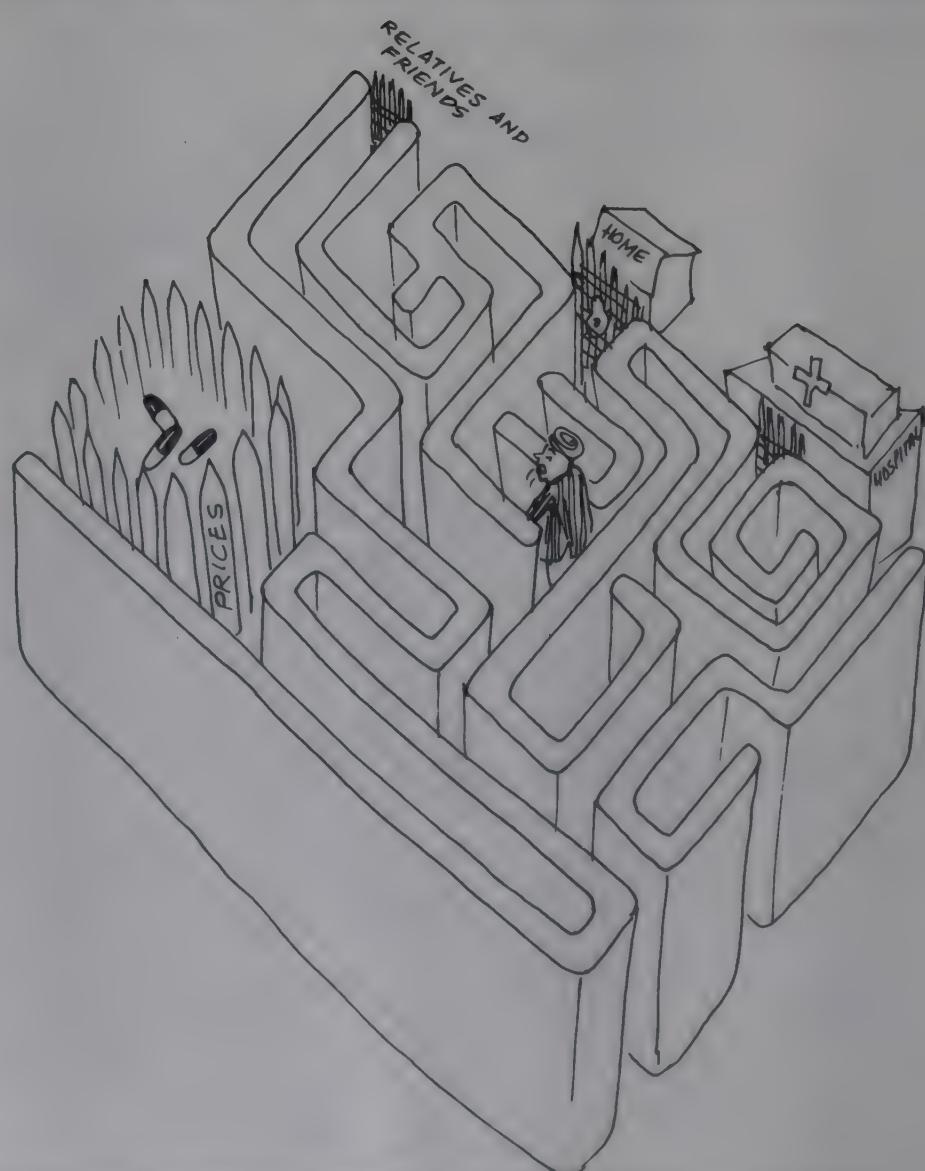
Metropolitan cities like Delhi

are full of congestion. An underprivileged person like Ram Nath can never afford to have his own conveyance and has to travel by crowded public transport, where he had plenty of opportunity to come in contact with TB patient unknowingly. Second, Ram Nath's profession also demanded a high mobility to different houses and places where he must be meeting different people. He might have easily come in contact with TB patients also.

Ram Nath admitted that he had been smoking bidi for the last 30 years regularly, a potential cause of low resistance to fight against TB and was also not immunized for BCG.

It could have been very difficult for a person like Ram Nath to manage a high calorie diet and expenses of medicine on his own. Thanks to CGHS which bears all his medical expenses and medical

care. The nutritious or high calorie food is also provided by TB Hospital. Ram Nath, being an indoor patient living for the last few months, is availing all facilities available for the patient. The hospital provides him food which contains Rice, Roti, Dal, Green Vegetable, Egg, Milk, Bread and Butter every day and also provides non-vegetarian items weekly. Ram Nath is quite satisfied with the attitude of doctor and nurses and is very optimistic that he will recover from this disease. However, Ram Nath feels neglected and finds that his siblings, friends and neighbours have developed a callous attitude towards him and avoid him due to the disease. Tuberculosis is still taken as a stigma in our society. May be due to lack of education and proper information, our society tends to reject a patient at the time when he really needs social support, for boosting his morale. Even if a



person recovers from the disease, he is viewed with suspicion and finds it difficult to get along normally with other people. This may be a reason, he does not want to leave the TB Hospital, even after his recovery from the disease. The very thought of leaving TB Hospital grips his mind with the fear of loneliness and social rejection.

Case No. 2

Nineteen year old Anita is a young and charming girl belonging to an affluent family residing in a posh colony (Greater Kailash) of South Delhi. Anita is a student. Her family comprises of three members, herself and her patients. Her living conditions are extremely good, properly cemented house with full scope of light and pure air. She has her own room which is not shared with anyone else. She enjoys all comforts and facilities which prosperity can bring. Health and nutritious food has never been a problem for her. Apart from roti, dal and green vegetable, she was also provided with high calorie food like milk and milk products and meat by her health conscious mother.

Life was going on quite fine for her, devoting regular five hours to her studies. Everything was all right before they appointed a new servant in their house about three years back. The young servant who worked in their house for one year was a TB patient which they came to know only quite late. Anita who had no health problems so far, started complaining of low fever in evenings, accompanied with cough, chest pain and expectoration which was grey in colour. In the month of January 1986 after 20 days of sickness she consulted a local private doctor. When there was no improvement in her condition the doctor was changed and another doctor was consulted who prescribed several tests such as X-ray, ESR (Blood) and sputum and doctor diagnosed the disease to be a case of tuberculosis. Anita was

already immunized with BCG. Anita who was in the prime of youth was not told about her disease. Her parents tried to conceal the disease from her and were successful also until her brother-in-law revealed the disease to her after 2-3 months. It was a big shock for her who had already seen a patient of Tuberculosis. She knew that TB is a dangerous disease and proper care should be taken to get rid of it. Besides this, her parents had forbidden her to reveal it to any of her friends. Her treatment was started in a private nursing home. After four months of chemotherapy, she along with her brother-in-law who had a good contact with the incharge of TB Mehrauli Hospital, visited to get confirmation of proper diagnosis and treatment as outdoor patient.

Nutritious food and medicine expenditure were no problem as her parents had no monetary problem. She took medicine quite regularly and was looked after properly by her parents. Her parents and close relatives become quite sympathetic towards her. Though she never felt neglected on part of her family members but due to sickness she had some psychological problems as she felt lonely and used to avoid company of other people. Still she always felt that she would recover very soon. Though Anita belonged to an upper strata of society, even then her disease was concealed from the people other than her own family members. This shows the misconception and social stigma attached to this disease.

None of her friends or neighbours were aware of this disease. Anita has been cured of the disease completely after five months of her illness, still it is kept as a close secret especially due to the fact that she is an unmarried girl and any leakage of this fact might have an adverse effect on her marriage negotiation. This is the situation of the upper class of our society, not to say anything about

those who are illiterate and belong to lower class. This underscores the need of massive awareness programme regarding the disease.

Case No. 3

Ayesha Khatoon is a nineteen year old married woman belonging to a Muslim family. She got married at the age of fifteen and after one year of marriage was blessed with a son. Ayesha Khatoon who hardly received any education had to lead a life full of bereavements. Her husband could hardly manage two square meals in his meagre income of Rs.300/- a month. There was no question of any savings. Her family consisting of three members had to live in an uncemented house with mud wall and cemented roof with hardly any scope of ventilation or sun-rays. Needless to mention that sanitary condition was also very poor. This small house having three occupants was full of smoke of kerosene oil at the time of cooking, as there was no provision for chimney in the kitchen. This was an ideal environment for the TB germs to grow and it caught hold of Ayesha who was not vaccinated with BCG in her childhood. Initially, she found herself in grip of high fever which continued for about four hours every evening. As there was no improvement after one and half year, she consulted a doctor. After this she decided to come to Delhi and went to Safdarjung Hospital which referred her to TB Hospital, Mehrauli. For poor Ayesha and her husband it was really hard to live away from their house for such a long duration. However, they somehow managed to find a place in a village in South Delhi which was quite near to TB Hospital, i.e., hardly 3 km. Thanks to the TB Hospital which bears all her medical expenses which was impossible for her to afford otherwise, she had to undergo several tests like X-ray, blood and sputum. The doctor diagnosed that it was a case of Tuberculosis in August, 1986. It was quite sad for

Ayesha, who had seen her 32 years old uncle suffering from TB when she was a small child. Though her uncle recovered after a treatment for the disease from TB Hospital, all that she could recollect was that it is contagious. The very thought of this made her avoid social interaction. However, she never feels neglected or lonely as she is looked after nicely by the members of her family, who are very sympathetic towards her especially due to her illness. She is quite optimistic that she would get cured and be able to lead a happy and healthy life with her husband and child. The main factor responsible for Ayesha to become a victim of TB is her pathetic and unhygienic living condition, due to poverty. She was taking domiciliary treatment while, as per protocol of the domiciliary treatment a patient of TB should have atleast some

basic facilities such as hygienic and open surroundings, facilities to take rest and proper nutritious diet. But as a patient of TB she was not availing the basic requirement for domiciliary treatment. Infact she should have gone for indoor treatment rather than taking domiciliary treatment which may aggravate the chances of relapse or spreading it to others.

Conclusion

On the basis of above cited case-studies, the following remarks may be made:

- ◆ Social stigma against tuberculosis is still dominant regardless of caste and creed, rural and urban, upper and lower class, educated and illiterate etc.
- ◆ It is not only a poverty related disease but it is found among

higher categories also.

- ◆ Maid servant/servants appear to be one of the most important transmitting agents of tuberculosis.
- ◆ Family and community support is very crucial.
- ◆ The perception of the patient towards his/her life and people (society) changes within moment when they come to know that they are patient of tuberculosis.
- ◆ It is commonly found that the physical recovery on part of patient is faster than the psychological recovery. The existing National Tuberculosis Control Programme (NTCP) must take care of such crucial behavioural dimensions of tuberculosis patient from the management point of view □

The Two-Rupee Doctor

What could be the consulting fee of a senior and experienced allopathic doctor, specialised in two subjects, practising in the Calcutta of the 90s? Well, it could be anything, depending on demand. It's good to know that in the days of rising prices, there's one doctor whose fee is fixed for life by a fiat from his father. And the fee is low. But exactly how "low" could the low fee be? Dr. A. Brahma, MBBS, DTMH, DGO is not a medical Robin Hood: he does not rob Peter to pay Paul. He charges Rs.2 from all his patients.

Amiya Bhushan Brahma was born in an old, affluent and educated family in Meenakhan, South 24 Parganas; his father, an exceptionally incorruptible official in the zamindari estate there, had rigorously practised frugal living, prescribing it for his family as well. Young Amiya, a brilliant student, who won prizes and district scholarships, eventually came to Calcutta and chose medicine to serve the people.

"I passed from Campbell Medical School, worked in Campbell I.D. and I taught in Campbell too," says a proud Dr.

Asked why his approach is different from other doctors, he explains: "In 1963 when I quit the Health Services for private practice, my father asked me to serve and heal the poor, and I promised. Lest I hike my fee beyond their means, he also extracted from me the promise that I would never raise my fee above Rs.2, which still had some value then. My father is no more, and even though inflation has devalued Rs.2, I've kept my charge the same. I can't break a promise I made to my father."

There is a difference in his methods of practice as well. "Since I work among the poor most of the time", he explains. "I rely more heavily on clinical rather than pathological observation. I don't go in for TC, DC, ESR, Bilirubin, Rose Waaler, Gravindex test etc. in a routine way, except when these are unavoidable. And I use the minimum of medication, which suits both the health and purse of my patients."

Despite his low fee, he had enjoyed a

roaring practice in his youth as a DGO, as is evident from the sign "Maternity and Child Health Clinic" on his door. The consulting room now wears all the signs of decay and neglect. It has photographs of his family members and of his favourite gods, the latter adorned with small dried-up wreaths. The walls, ceiling and furniture do not appear to have been painted or cleaned for years. Old age and the unprofitable character of his profession had obviously led to the erosion of capital.

His patients wait patiently on two benches in the ill-ventilated and poorly illuminated passage leading to his chamber. Others stand or park themselves on the stairs. The patients-in-waiting take upon themselves willingly the task of apprising any newcomer of the only prohibition in that place — not to visit Dr. Brahma in his chamber with shoes on.

Though denied by Dr. Brahma, this correspondent gathered from different sources that the local physicians, embittered by loss of patients, had tried to force Dr. Brahma to quit his "Du takar daktary". Needless to say, the doughty doctor has carried on, undaunted.

"Every night I go to bed with a clear conscience, happy to have performed *pitriadesh* to the best of my abilities. What more can a son expect to achieve?" says Dr. Brahma.

Source: Sujit K. Bhattacharyya, *The Telegraph*, Calcutta, 7.2.95.

Family Physicians in TB Care

Dr. S. N. Misra

Dr. S. N. Misra is Hon. Joint Secretary of Indian Medical Association, New Delhi

Tuberculosis (TB) continues to be a major public health problem in our country. The current National Programme was introduced in 1962. More than 30 years have passed, but the problem continues to be as severe as before and the performance under the programme has been unsatisfactory. One of the reasons for poor performance has been that the Family Physicians, who constitute a major sector of the country's health personnel, have been kept out of the programme.

Family Physicians

Almost all patients with chest symptoms first contact a family physician. If found tuberculous, many of them prefer to take treatment from a family physician because of convenience of time and place. However, the T.B. drugs being rather costly and the duration of treatment being a minimum of 6 months, some of them stop treatment prematurely because of the cost or because they think that they are cured. Since the family physicians do not have a machinery at their disposal to prevent default, the treatment ultimately fails.

Now that the government is thinking of revamping the strategy for the control of T.B., IMA feels that the family physicians should be brought in the picture. To that extent, IMA offers its good offices to bring the family physicians in the programme.

Modus Operandi

We suggest that a Pilot Programme may be implemented in three

provinces in the country, namely Gujarat, Bihar and Bengal and in two metropolitan cities, e.g., Delhi and Calcutta. To begin with, a population of about 2 lakhs will be chosen. For every 20,000 persons, we would like to involve 1 doctor, i.e., 10 doctors for a population of 2 lakhs.

The IMA will select Family Physicians who are willing to do this work. The participating physician will identify a person with suggestive symptom from amongst those who report to him. Such a person with suggestive symptom will be referred to the area T.B. Clinic/Primary Health Centre for diagnosis. It is understood that the basis of diagnosis will be sputum examination and X-Ray examination (if available) on the same basis as for patients directly referred to the T.B. Clinic/Primary Health Centre. If the patients so referred are found to be tuberculous, treatment will be taken up by the family physicians in accordance with the prescribed procedures. The drugs for free distribution to the patients will be supplied free by the Government through a Local Branch of IMA. The Family Physicians will keep proper account of drugs and send periodic reports to the Government/IMA as per the approved procedures. If a patient defaults, the family physician will inform the T.B. Clinic/PHC for the routine default action. For periodic examination of the sputum, the patients will again be referred to the T.B. Clinic/PHC as per approved procedure. At the completion of the treatment a final

report will have to be submitted to the Government/IMA.

The family physician will charge the patient his usual consultation fee at the time of the first attendance. If the patient is found tuberculous, the family physician will not charge any fee from the patient. However, if the patient is not found to be tuberculous, further treatment will be at the discretion of the family physician.

The IMA suggests that the family physician who participates in the National Programme may be given by the Government, a sum of Rs.400/- to Rs.500/- per patient treated by the Family Physician. It may be pointed out that since the drug regimen being prescribed under the national programme is an intermittent arrangement with the drugs to be administered, the duration of treatment of each patient will involve a minimum of 80 visits to the Drugs Clinics by a patient. In case an adverse reaction to the drug appears, the number of visits may actually be more. Considering that, the remuneration suggested above does not seem to be in excess.

It may also be pointed out that for the successful working of the scheme, it will be desirable that if the patients from the areas assigned to family physician attend T.B. Clinic/PHC directly, such patients may also be referred to the Family Physicians for further treatment.

Paramedics

The paramedical personnel of the

area assigned to a TB Clinic/PHC will have to be in contact with the family physician through a periodic visit so that any difficulty which may arise during the course of the treatment could be taken care of.

The Government will have to

arrange a crash re-orientation course in the procedures and practices to be followed under the National T.B. Control Programme for the participating family physicians.

As a Non-Governmental

organisation, IMA involved in the programme will have to incur administrative as well as postal expenditure etc. The Government will have to reimburse this expenditure to IMA. □

In Search of Cure

Vimaltai lives in Malshiras near Pune. The village with a population of nearly 2,500 has a primary health centre (PHC), with two qualified (MBBS) doctors, two multipurpose workers (MPW), a nurse mid-wife and an auxiliary nurse mid-wife. There are three community health workers in the village. The PHC implements the national programme for the eradication of tuberculosis.

When Bhanudas Jadhav of Arogya Shikshan Kendra spoke to six people suffering from T.B. what emerged was a sad reflection of the woeful lack of basic awareness among the patients about the disease, ignorance about the importance of continuing the treatment and the serious consequences of discontinuing it. Needless to say this is mainly due to socio-economic reasons. But sadly the results can be fatal.

Frequent breaks in the treatment exposed one to the danger of the tuberculosis bacilli becoming immune to the drug which eventually has no effect on the patient, and the patient more often than not dies a slow death.

Another dangerous trend observed is the frequent change of doctors when quick improvement in health is not noticed. This leads to avoidable expenses and time, not to mention the hazards caused in the long run. Such a search for immediate cure is irrational.

Vimaltai is a representative case. In the last four years, she has visited any number of doctors from whom she started and discontinued taking Streptomycin injections several times. Finally she visited the PHC, and on the insistence of the doctor there took the

complete course of 90 injections. Yet her condition has not improved. The 45-year-old woman who had only recently completed the course of 90 injections still complains of persistent dry cough, giddiness, shivering and fever.

Did you consult the doctor about your persistent complaint?

Yes, I did. He has given me these blue pills and a bottle of medicine. He says my illness persists because I did not complete the course of injections four years ago.

Why did you discontinue the treatment?

Four years ago, I was suffering from cough and breathlessness. So Dilip's (son) father took me to a private practitioner, Dr. Kamble in Saswad. The doctor examined my sputum, took my x-ray and gave me some pills and medicine and also prescribed a course of 90 injections.

Did you take the medicine and injection regularly?

No, I took them whenever I had the money, may be three or four times a week for about three months. Vasant (son) then took me to the public hospital in Satara. With the help of the nurse next door I saw a good doctor who again advised me to take 90 injections.

So you restarted the injections there?

I took about 40 injections and stopped. I was feeling a little better and the nurse was to be transferred. So I saw no point in going to another doctor. Moreover, I was getting bored, so I returned home.

Did you fall ill again?

Yes. A few months later, I went to Aptebai (a retired nurse who has a private practice now) and she too told me to take

the same injections three or four times in a week. So I started the injections again.

Did you feel better then?

No, I didn't. But I didn't get any worse either. At that time one Dr. Ukhali, a private practitioner, came to our village and I started taking injections from him for some time.

Did your health improve?

A bit. Then I went to Pune to the municipal Tarachand hospital as I was scared of going to the government-run Sasoon Hospital. They took my X-ray and again told me to take the injections. I then returned home and once again started taking injections from Aptebai. Around that time, Dr. Khandale came to the PHC here and I went to consult him. He too told me to continue with the same injections and I took 90 injections for 90 days from him, but still I do not feel better.

Did any of the doctors tell you what you are suffering from?

The PHC doctor told me later.

How much have you spent on treatment so far?

About 4,000/- to 5,000/-.

What did you feel when you first fell ill?

I wondered if I would survive.

Vimaltai now plans to continue with the blue pills given to her. In due course, she will perhaps consult more doctors and spend more money. But the moot question is will she be cured and when?

Source: FRCH Newsletter, March-April, 1988, Vol. II, No. 2, P.4.

Tuberculosis Control Programme in Rural Area: Experiences from the Field

Dr. H. Sudarshan

Dr. V. S. Sridharan

Dr. H. Sudarshan and Dr. V. S. Sridharan work in Karuna Trust, B.R. Hills, Mysore District, Karnataka

Dr. H. Sudarshan is the recipient of the prestigious Right Livelihood Award last year. Dr. Sudarshan has been involved with Vivekananda Girijana Kalyana Kendra, Karnataka, for more than a decade.

Tuberculosis is one of the most neglected health crisis of the world, which kills more adults each year than any other infectious disease, more than AIDS, diarrhoea, malaria & other tropical diseases combined. This is inspite of the fact that we have now very potent drugs to bring about complete cure of the illness. According to the National Tuberculosis Programme, only 30% of the people put on conventional regimen and 52% of the people put on SCC complete the treatment. To find cases is always easier than to treat them successfully. To search for cases without being able to treat them properly after they have been found is irrational and harmful — it increases patient's suffering and undermines the confidence in the health care system. "The irregular treatment of many patients who leave treatment when feeling better but return when symptoms return allows them to live longer, but fails to cure them. Thus the net effect of such programmes may be to increase the number of sources of infection within the community". (each sputum positive case can infect as many as 10 to 14 people in a year's time). Under mass treatment conditions, what is normally good chemotherapy becomes, in fact poor chemotherapy. Poor compliance is

the most important reason. Directly observed chemotherapy is the only means to ensure compliance and direct observation of drug taking must be the practice atleast during the intensive phase of chemotherapy in smear positive pulmonary tuberculosis patients. Good results with Rifampicin containing regimens are obtained under a precise set of pre-requisites — a political commitment to ensure correct operation of the programme, regular supply of materials, diagnosis based of bacteriological exam, correct recording and reporting of diagnosis and treatment results and direct observation of drug intake. Failure to follow these pre-requisites often results in very poor outcome.

Inspite of the great advances

made in the medical knowledge of Tuberculosis our country has failed to control the disease. The valuable knowledge of our scientists is yet to be translated into action through NTP. The role of Voluntary Organisations in our country in the Tuberculosis Control Programme has also been very limited. This is in contrast to the very important role of NGOs in the Leprosy Eradication Programme.

Lesson from National Leprosy Eradication Programme (NLEP) Successes

- ◆ The positive approach of Government to involve Voluntary Organisations in Leprosy Eradication Programme.
- ◆ The support of Foreign Donor Agencies.



The healing touch by Dr. Sudarshan

- ◆ Powerful lobby of committed people at the National and State levels.
- ◆ Creating political commitment for the programme.
- ◆ Good Health education materials and strategies.

Drawbacks

- ◆ It is not an integrated primary health programme and it is still a vertical programme.
- ◆ It is costly and drains away the limited resources available to a single programme at the expense of other important primary health care programmes.
- ◆ The staff appointed for vertical programme are unwilling to integrate it with Primary Health Care even after the prevalence has been brought down to very low levels in certain MDT District.
- ◆ Even in non-endemic areas the Government is planning a vertical programme with Mobile Leprosy Control Units (MLCUs).
- ◆ Getting World Bank loans even when the grants are coming from Foreign Donor Agencies like SIDA, DANIDA, Leprosy Mission, GLRA, etc.

Karuna Trust

With the above mentioned factors in mind, Tuberculosis control programme was launched in Karuna Trust, which is a Voluntary Organisation, working since 1987 in the field of Leprosy in Yelandur taluk with a population of 69,484 spread over 40 villages. Though the Trust started its health work with a vertical programme, it aims at a comprehensive community based health project. It now incorporates three programmes, namely, Leprosy, Epilepsy and Tuberculosis. The Tuberculosis programme for the entire population of Yelandur taluk was started on 1.1.1992. The main objective of the programme is to reduce the prevalence of the

disease in the community to the level where it ceases to be a public health problem.

Karuna Trust is staffed by a Medical officer, a supervisor, a smear technician and a team of committed para medical workers. Before starting the programme all the staff underwent training at the National Tuberculosis Institute, Bangalore.

Experiences in Case Finding

Though studies have shown that sputum examination of the patients with chest symptoms, attending general health centres could detect within one year about 65% of all smear positive cases, we implemented a SET (survey, education and treatment) programme as we already had a base line survey data of the taluk.

The case finding by local PHCs was very poor and a large number of cases were undetected and untreated. House to house survey is being done as an ongoing programme to detect chest symptomatics, these cases are subjected to sputum smear examination. The PMWs collect and send the sputum specimens to the microscopy centre at Karuna Trust. Voluntary cases are detected at the chest clinic run on every Monday at Karuna Trust. Chest X-rays are done only for sputum smear negative but clinical suspects.

The Following Observations were made During Case Finding

- ◆ A large percentage of cases had visited a PHC for the same

complaint without being diagnosed as Tuberculosis though a simple microscopic exam of the sputum would have clinched the diagnosis.

- ◆ Those cases who were initially treated for tuberculosis before coming to Karuna Trust were started on treatment without even a sputum exam. They were diagnosed on the basis of X-ray.
- ◆ Many cases of sputum positive tuberculosis were on treatment with Rifampicin containing regimen for varying periods of time before being registered at Karuna Trust.
- ◆ The recording of data was incomplete (many times lacking even the sputum exam report) even in cases referred from sanitaria for follow up of treatment.

Experiences in Case Holding and Treatment

At Karuna Trust all sputum positive cases registered for treatment were given Supervised, Ambulatory, Biweekly, Intermittent chemotherapy namely, 2 S 2 H 2 R 2 Z 2/H 2 R 2 OR 2 E 2 H 2 R 2 Z 2/4 H 2 R 2.

We found that the compliance was very good. If the patient missed even one dose, our PMW or in some cases the medical officer would visit the patient, talk to him and convince him about the importance of treatment. In cases where there are genuine reasons for the inability of the patient to visit the clinic twice a week, he would be given the medicine at home under

Status	Number		
	Sputum Positive	Sputum Negative	Extra Pulmonary
Cured	64	28	13
Death	9	2	-
Lost	28	23	1
On Treatment	28	13	2
Transferred	5	3	
Treatment Failure	12		

supervision of our PMW. From the beginning of the project till October 1994, a total of 231 cases have been registered.

The most important observation that was made during treatment was the following vicious cycle, set in motion by private medical practitioners and by a few DTC personnel. Patients in general have greater faith in private medical practitioners than in Government Hospitals. The reasons for this are manifold and are not always irrational. Unfortunately, these patients are put on Rifampicin containing regimen (we have seen as many as 20 different regimens, only a few being accepted by NTI) just on the basis of an X-ray. We are yet to come across a single case treated by a private doctor after a sputum smear microscopy. Even supporting it was a sputum positive case, the patient does not continue the treatment prescribed for more than 3 to 4 weeks at a stretch. He stops the treatment because he feels better and also runs short of money. When he feels ill once again, he shows the same prescription at the medical store (who also have the habit of prescribing TB drugs on their own) and gets treatment for another few weeks. He repeats such a process atleast half a dozen times before he lands up at our door. We have found that quite a number of sputum positive cases belong to this category. If this trend goes on we will be in for a greater catastrophe, namely, nationwide emergence of multi drug resistant tuberculosis.

Discussion

The basic principles of community based TB treatment are well laid out, but completion of treatment rates are very low in many programmes. Apart from case finding, the critical aspect of management is ensuring compliance with a full course of chemotherapy. Our experience

shows high level of compliance of treatment (default of only 19.1% among sputum positive cases). Even though ours is a vertical programme, similar levels of compliance are still achievable even within the context of a routine service.

- ◆ From the statistics given above, it is seen that the cases lost among sputum positives form 18.2%. Though they are lost from our care, many of them continue to take treatment from private doctors of their choice. In the true sense they are not defaulters! If only the attending private physician can make them complete the treatment, even these lost cases can be cured. At Karuna Trust, we are planning an interaction with the private doctors to achieve this goal.
- ◆ Treatment failure in our experience is 10.1%. All of them have had Rifampicin containing regimen for varying periods irregularly before coming to Karuna Trust. As the second line drugs are very expensive, we are treating two of them with re-treatment regimen advised by NTI. These two patients are very regular, which shows that if they had proper treatment initially they would have been cured completley.
- ◆ Attempts are being made at our project to decentralise drug collection, as in MDT therapy for leprosy where patients have to come to the drug collection points which will be less than a few kms from their home. We hope this will further enhance our case holding.
- ◆ Another significant experience in treatment was getting adequate supply of drugs and other lab requirements from DTC. Initially the supplies were erratic, but subsequently, after repeated representation at the state and central levels we have been able to get the supplies

regularly. The strength of the medicines given by DTC also vary frequently. This also poses problem as the patient may have to swallow varying numbers of tablets. Supply of higher strengths of medicines will also be helpful.

SUGGESTIONS

- ◆ We need to urgently mobilise the polictical will and get **adequate resources** for effectively controlling the disease. This can be done by forming an active **lobby** of committed people from the Government and the Voluntary Organisation.
- ◆ Give due importance for the rich experience of National Tuberculosis Institute (NTI) whenever the NTP is to be revised. Our own scientists have better experience than the WHO or World Bank experts. The following stands taken by the NTI should not be neglected:
 - ◆ NTI should be an **Integrated Programme** and not a vertical programme.
 - ◆ **Low cost/cost effective** technology for diagnosis of Tuberculosis.
 - ◆ **Regimens** suitable for our country. Sharing the limited resources for the benefit of large number of patients.
 - ◆ **Integration** does not mean integration into the Family Welfare Programme which dominates the Primary Health Care. It means giving due importance to Tuberculosis in the comprehensive primary health care. Training PHC Medical Officer in NTP.
 - ◆ Evolving an effective **moitoring body** for NTP.
 - ◆ Involving the **Gram Panchayats**, Taluk Panchayats and Zilla panchayats in the

NTP. Demystifying the indicators and evolving meaningful indicators and targets.

- ◆ Ensuring adequate and timely **supply of Anti-Tubercular drugs**. The purchasing procedures of drugs need to be streamlined and enforced to see that adequate quantity of drugs are manufactured by the drug companies.
- ◆ The Government should not be compelled by the World Bank and WHO to alter our policies just because they are funding the NTP. We should have the **freedom** to run it in our own way based on our rich experience in the past.
- ◆ Involving the **General Practitioners** in the NTP by motivating them to play a more responsible role. Creating awareness about NTP amongst General Practitioners.

Government and Voluntary Organisation

- ◆ The Government should involve the Voluntary Organisation in the **Planning**,

Implementation and Evaluation of the NTP. They should not be treated as mere agencies to implement Government programmes.

- ◆ NGOs does not mean just the Tuberculosis Association of India and its state branches. There are hundreds of Voluntary Organisations who need to be involved in the NTP-the member organisations of Vhai, Chai, Cmai, etc.
- ◆ The procedures for grant-in-aid need to be simplified.
- ◆ The Voluntary Organisations and Foreign Donors who are running Leprosy programmes should also be involved in the Tuberculosis Programme.

The following factors need to be taken into account in providing the service:

- ◆ Regular audit of the work and the results of the audit must be shared with the staff.
- ◆ PMWs must be motivated (In Bangladesh an incentive scheme for health workers has been introduced to improve the compliance).

- ◆ The service must be acceptable to the patient, taking into account the time, money involved in his visit to the collection centre (Supervised intermittent regimen).
- ◆ A good and continued rapport between the staff and patient (especially the medical staff) is very important in instilling confidence in the patient. This needs a lot of patient listening.
- ◆ As quite a number of tuberculosis patients tend to take treatment with the private medical practitioners, attempts must be made in a nationwide manner to educate the medical officers about the importance of case finding and treatment as per NTI guidelines. New and innovative approaches are needed to combat the global tuberculosis endemic.

Community based TB control programme is the only effective way to manage the increasing numbers of patients. If this is ineffective it itself will be a risk as it will actually increase the transmission and drug resistance. □

WHO Warns Of New, Drug Resistant TB Strains

On the 50th anniversary of the first injection of an antibiotic to cure tuberculosis (TB), the World Health Organisation (WHO) has issued a warning that the world may soon face an epidemic of drug resistant strains of the deadly disease.

WHO is urging the international medical community to give high priority to the search for new anti-TB medicines.

Since 1944, when a 21-year-old American woman received the first injection of Streptomycin, anti-TB drugs have been used extensively in Japan, North America and Europe, where they have dramatically reduced the number of TB cases and deaths.

However, efforts to control TB in the less developed countries have been neglected, enabling the disease to spread to other parts of the world in more dangerous, multidrug-resistant forms, according to a WHO statement released November 17.

"We are shooting ourselves in one foot by making poor use of existing anti-TB medicines. Now we are about (to shoot

ourselves in the other foot by failing to develop new TB drugs for use in the future," said Dr. Arata Kochi, manager of WHO's TB programme.

"In effect we are creating an epidemic of multidrug-resistant TB, and avoiding a search for its cure," he warned.

Tuberculosis kills three million people every year, more than all other infectious diseases combined, according to WHO's TB programme.

New strains of drug resistant TB bacilli do not develop naturally, but emerge when treatment of a TB patient is inadequate or incomplete, allowing the stronger bacilli to survive and multiply. It then becomes more difficult to cure the infected patient and prevent that person from spreading drug-resistant bacilli to others.

The standard TB treatment takes a very long time-usually six to eight months - and patients must take up to a dozen pills every day. The length and inconvenience of the treatment increases the chances that it may be interrupted or discontinued prematurely.

The possibility that a new cure might

shorten the length of treatment is an important reason to intensify the search, according to Kochi.

Despite all the medical advances of the last decades, it has been nearly thirty years since the last introduction of a new anti-TB drug, according to WHO.

Dr. Richard O'Brian, the WHO officer responsible for TB drug development, says new medicines "will be needed to help cure the waves of multidrug-resistant TB cases we can expect in the future."

Thirty million people are expected to die from TB during the next decade, according to WHO. Nearly half of them could be saved by funding strategies to put existing medicines to better use, O'Brian said.

The lives of the 15 million others will depend on whether new medicines and improved diagnostic tools can be developed, he said.

Source: Wendy Lubetkin, Herald, Panjim, December 5, 1995.

Role of NGOs in Tuberculosis Control

Dr. D. R. NAGPAUL is Vice Chairman of the Tuberculosis Association of India, New Delhi

Dr. D. R. NAGPAUL

To bring tuberculosis under control in this country, we have the National Tuberculosis Control Programme (NTP). Planned and organised by the Government, at the Centre as well as in the States, the NTP has a nationwide sweep. It has been in operation since 1962 and already 393 districts in the country have fully operative District Tuberculosis Programmes (DTPs).

The size of the tuberculosis problem in the country and its ubiquitous distribution in urban and rural areas, however, make it obvious that Government alone may not be able to succeed in controlling tuberculosis. No wonder, the efficiency of case-finding under NTP has not gone beyond 30 percent and that of treatment has hovered around 40 to 50 percent. Information on results of treatment is not even available. Such levels of achievement can hardly be expected to take us near to our goal. Atleast, not in the near future. Experts believe that with the said levels of achievement the fall in the incidence of infection and prevalence of the disease would be only slightly better than the natural decline in tuberculosis. The prospect of tuberculosis remaining as a health problem, for decades if not a century or so, is therefore inescapable.

The Challenge of HIV

Meanwhile, an epidemic of HIV infection (and AIDS) is knocking at our doors. There is still insufficient information on how severe and rapid the Indian HIV epidemic will be, because most of the quoted

estimates are based on experiences from countries which are ethnically, sociologically and economically quite different. And, these factors are known to vitally influence the character of HIV epidemic. Nonetheless, the very close unfavourable relationship between the HIV infection and prevalence of tuberculosis is by now well established, which suggests that whatever be the character of the HIV epidemic in India, the tuberculosis situation is bound to get worse, perhaps in the near future. Therefore, we have nothing but a grim scenario before us, unless urgent steps could somehow be taken to get quicker and better results under the NTP.

Irrespective of whatever we are actually able to do in the future, one aspect is so clear that it looks like the proverbial writing on the wall. The present paternalistic pattern of tuberculosis services is bound to have insufficient efficiency until peoples' cooperation and participation in NTP is not obtained. The people must be made more aware of the importance of their health and the value of actively utilising the facilities provided for the sake of their own health notwithstanding some problems they may have to face under the existing configuration. Several studies have shown that the people are sufficiently aware of tuberculosis and what needs to be done to alleviate their suffering. But they get easily put off by the problems of delays, attitudes and shortages in the "system", which translates into an inefficient NTP. Instead of continuing with the now unnecessary KAP studies, or

blaming the patients or the system, we must change the strategy: **Organise the people through action-oriented health education to avail of NTP services through a social approach of self-help.**

Social Strategy

It may be unrealistic to expect the Government to undertake the newly suggested "social strategy", busy as they are in tackling the many organisational insufficiencies in the NTP system. NGOs are not only the most suitable for such a purpose, being closer to the people from the top levels to the grassroots, but also on account of the kind of work they have been doing for decades. And, the Government having recognised their past contributions to NTP has been helping them out with financial grants and supply of anti-tuberculosis drugs. Therefore, instead of resting on their past laurels, NGOs should bestir themselves and assume leadership in the "social strategy", as the Government is doing by revising the "technical strategy" of NTP. In other words, NGOs should play their role more dynamically, in line with the demands of the situation, instead of being content with the importance of their role.

NGOs and Government

There is no doubt that NGOs have certain strengths which make them more suitable for playing the social leadership role. For example, they have the lodestar of idealism to guide them and a band of "do-gooder" volunteers who are willing to give their time and talent for free;



Jayavayam Tribal Hospital which serves as a base hospital for the entire project area (VGKK).

greater financial and administrative freedom to act compared with that in Government and a degree of cohesion which makes them strong, though being small in size. Their weaknesses are equally far-reaching. They are often content with small achievements, which in a larger perspective may not amount to much; remain self-centered instead of reaching out to other organisations/people and cooperate with them for higher stakes and not employing the available modern technologies especially management by objectives (MBO). The chief concern of many NGOs is survival.

It must be acknowledged that Government has taken several positive steps to encourage NGOs to play a far more active and

positive role in NTP. In September 1991, on the recommendation of a high powered group of experts which met at Surajkund, Government agreed to make NGOs partners in NTP. That step was seen as a highly cost effective step to improve NTP relatively quickly. However, the organisational steps that were needed to make the partnership real could not be taken, perhaps because it is a completely unchartered field. Again, in January 1994 a workshop was organised, in which representatives of several NGOs participated, to discuss ways and means by which the NGOs could play their rightful role in NTP. The outcome of this effort is not yet visible. While the initiatives taken by the Government are laudable, the relative passivity of NGOs

appears strange if not completely out of character. It is possible that NGOs long used to the cliches about the importance of their role in NTP, failed to realise that, that phase was over and they have now to get involved in the nitty gritty of playing that role.

The need of the hour is serious thinking, wide ranging discussion, active planning and close collaboration with the

Government in NTP. For this NGOs must first put their houses in order, then come forward and reach out to the people as well as the Government. Their success will be judged by the extent of community participation in NTP. For collaboration with Government, the attitudes of officials which are peculiar to the exercise of power through a bureaucratic set up must be studied and understood well and their offer of partnership welcomed enthusiastically. For working with people instead of doubting their awareness and action-taking, the natural social bodies could be made privy to the problems of NTP which are making the tuberculosis services inefficient and planning with them to increase the utilisation of the services through a participatory approach. □

OBITUARY

The World Loses Its Strongest Advocate For Children UNICEF Executive Director James P. Grant dies at 72

Mr. James P. Grant, who stepped down as Executive Director of UNICEF on Thursday, 26 January, died in hospital on Saturday, 28 January after a long illness.

Mr. Grant, 72, served at the

helm of the United Nations Children's Fund (UNICEF) for 15 years.

"Very few men or women ever have the opportunity to do as much good in the world as James Grant, and very few have ever grasped that opportunity with such complete and dedicated commitment," U.N. Secretary-General Boutros Boutros-Ghali said in a tribute to James P. Grant.

During his 15-year tenure as head of UNICEF, Mr. James P. Grant showed an unflagging commitment, vision and dedication to improving the lives of the world's least advantaged

— the children of the developing world. Under his leadership, UNICEF confronted and decried what Mr. Grant called the silent emergency, the daily tragedy of millions of children caught in the relentless downward spiral of poverty, pollution, and environmental degradation. Each year, these conditions cause the deaths of millions and result in many more stunted lives. During Mr. Grant's term, UNICEF also responded to the loud emergencies, and worked to save the lives of women and children caught in disasters such as earthquakes, famine and war.

VHAI and SVHA Network



READINGS

DISABLED DISABLEMENT DISABLISM

Ali Baquer,

New Delhi: VHAI, 1994, pp.36,

Price: Rs.45/-.

DISABLED DISABLEMENT DISABLISM



Voluntary Health Association of India

The above is a report on different aspects of disability, from the pen of Ali Baquer, an experienced researcher and writer in the field of mental retardation; he also authored the script of the TV serial EK GHAR AAS PAAS of Doordarshan to highlight the residential needs of the mentally retarded. This report is intended as a tool to boost a mass movement for the rights of the disabled and urge the leadership to effectively guide the same.

Chapter One, traces the evolution of the welfare state from its beginnings in India post-1947 and in other countries, as in the U.K. after the World War II for rehabilitation of disabled soldiers.

At first it was completely government-controlled. We see how India stumbled initially in this respect, the main reason presented as the 'population explosion'. Gradually came opposition to an all-providing welfare state which led to a dependency culture, passivity and indolence, and a shift into commercial culture where services were no longer free but paid for. The author feels that while the present trend of government controlling a large volume of welfare services is essential, the private sector is playing an increasing role and the voluntary sector in particular can do a lot to supervise the quality and training prospects with better organisation. The need of the hour is to bridge the gap between needs of members and services provided as per existing resources where disability should be the prime concern.

Chapter Two, deals specifically with the Indian disability experience. It outlines some of the religious and social beliefs pertaining to the disabled and their negative role towards the same. Here we also get a glimpse of what the Constitution envisaged for all in terms of equality before law and the early rehabilitation services in India where missionaries and influential wives made great contributions. While India has achieved some success in creating and expanding services to those with physical, sensory and mental impairment through Central and State-level agencies; funds and objectives, especially of Voluntary agencies, need to be organised realistically. What is required is a change in the attitude.

In the following chapter, the author gives voice to the demand of the disabled for equality in all spheres. There is a common feeling of discrimination amongst the world's disabled compounded by environmental, institutional and attitudinal barriers. The author expresses the need for encouragement and opportunity to the disabled in partnership with others towards independence, dignity and active participation in their specific problems as well as those of society in general. America has taken an important step in this direction through legislation, a cue India could well take.

Chapter Four, dwells on the consequences of disability - physical, social, emotional and economic as well as the varied definitions of its extent in different parts of the world. It is alarming to note that India has anywhere between one to 12 million disabled persons. What needs to be cured is the social process of **DISABLISM** which combines prejudice, humiliation and discrimination to set the disabled apart from the mainstream of life.

Chapter Five, talks about the current controversy and uncertainty surrounding rehabilitation of the disabled. It appears that the experience of institutional care alone does not hold valid as it is far too expensive and the resources few. Instead, community care and voluntary agencies or private initiatives are finding favour as alternatives. However, the author cautions that community efforts must be sustained by an effective infrastructure for the disabled.

catering to their comprehensive needs along with some institutional support. He also mentions international agencies that have influenced rehabilitation for the better.

Chapter Six, examines the role of legislation in expediting change for the disabled, with the emphasis shifting from the pre-Independence concept of 'charity' to rehabilitation. The author reveals in much detail the various aspects of legislation attempted in India so far. While it is encouraging to note that some Bills took a very comprehensive view of the situation in their recommendations, it is shocking that none of these actually became law or saw implementation. The urgency is for serious legislation in this regard based on the actual needs of the disabled rather than on the changing situation of government resources. Resources must be utilised to meet essential needs, not vice versa.

The author ends his report, with a summary of the previous chapters, emphasising the change in outlook in the disabled towards life and suggestions as to how they can give greater voice to their needs. He urges responsible action by VHAI which connects remote areas of India, to coordinate planning, implementation, monitoring and evaluation of activity for significant results. Ali Baquer is convinced that a united approach in India can overcome the self-created barriers to disability. Are you?

This report is an outline of the major aspects of disability that we, together, need to deal with if we are to ensure proper care and full expression of the potential of the disabled. It is an eye-opener to the situation at large but there is much repetition in content. The suggestions should prove useful and the Reading List at the end a help to the interested. The print and layout make comfortable reading.

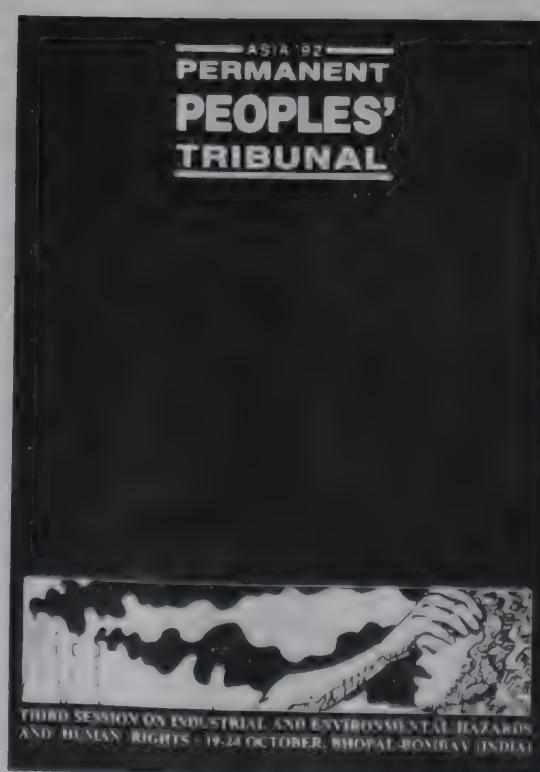
The most moving touch is the inclusion of a few poems that simply yet vividly express the emotions of a disabled person to inspire respect, not pity. To quote Eileen Giron :

"... This body - small, twisted and deformed - Enchants me. I want it. It is mine. I do not have another!"

Ritu Singh is a freelance writer for Children. She is a member of Association of Writers and Illustrators for Children (AWIC). She is adept in writing lyrics and prose for various age levels and themes.

Ritu's five adaptations of stories into scripts for plays in English is currently being published. □

ASIA '92 — Permanent People's Tribunal (records the session on Industrial and Environment Hazards and Human held during Oct. 14 - 24, 1992 at Bhopal.) pp. 58, Price : Unstated



As stressed in the foreword and in keeping with its quasi-judicial function, this tribunal addresses its findings to government and people's

movement alike—that death and injuries resulting from hazards are avoidable than inevitable and should be treated as human rights violations demanding urgent redress. The contents of this useful document are succinctly presented within 58 pages and seven chapters beginning with the aims of the session and then going into the fact and findings of the Bhopal case dealing with the medical treatment, the economic and environmental rehabilitation, the compensation given and the long term effects. It also dwells on the outcome of the revision petitions, criminal cases filed, delays and a commentary on the use of medical evidence with definitive conclusions drawn and judgments. The whole process has been facilitated due to the hearing at Bhopal itself providing access to the aggrieved parties whose numbers run to thousands and because the city symbolises the destructive potential of industrial technology. The reference to other cases in chapter five would be an invaluable guide to those involved in litigation and activists working in environmental and human rights issues. These are :

- ◆ Agent Orange in Vietnam
- ◆ Benguet Corporation, Phillipines
- ◆ Minamata and Niigata, Japan
- ◆ Asian Rare Earth, Malaysia
- ◆ Textile workers in South Korea
- ◆ Occupational Hazards in Thailand
- ◆ Silicosis in an Indian Glass factory
- ◆ Cipol Marco Incident in Hong Kong
- ◆ Occupational Health Hazards in Taiwan
- ◆ Industrial Hazards in Guangdong Province, People's Republic of China
- ◆ Hazards in the Export Processing Zone, Sri Lanka
- ◆ Industry in South Texas

The general findings on

environmental and industrial hazards cover nuclear technology, small scale units, transnational corporations, rights and responsibilities, human and labour rights, medical dimensions and legal hazards and revictimisation. An appropriate response, the Tribunal concludes, involves both legal and non-legal initiatives, and must join the political mobilisation of workers and communities with the technical expertise of scientists, engineers and the medical profession.

The actual sessions itself had ten judges, appointed in accordance with Article 6 of the statute of the Tribunal by the Permanent Peoples Tribunal, an Advisory Committee of twelve persons, eleven Technical Experts and four individuals who acted as Amicus Curiae drawn from India, the UK, USA, and Italy. The accused parties numbering seven Corporations including Union Carbide, and the Government of

India and Madhya Pradesh were notified of the sessions, sent copies of written testimony in which they were accused and invited to participate in the proceeding either by sending a representative or by submitting a written statement. It is not surprising to note that only two of the accused parties responded, one of whom failed to appear (Ministry of Chemical, Government of India) while the other Formosa Plastics, USA, submitted a written statement which was circulated to the members of the Tribunal along with the accusation that it had created environmental hazards violating the human rights of the community surrounding its Point Comfort, Texas. Thirteen international legal instruments were considered which included the Charter of the United Nations, 1945 and Universal Declaration of human rights among others. From the conclusions drawn at Yale and Bangkok sessions what emerged

were common demands of victims of industrial and environmental hazards. These are :

- ◆ I do not want to be a victim, and all steps should be taken to guard against my victimisation
- ◆ If I am a victim, I want all available help, and expect government, industry and community to come to my aid, and
- ◆ I do not want to be revictimised by governments, companies, courts or the medical and legal professions.

These demands are straight forward according to the Tribunal which attempts to elaborate them into a new people's jurisprudence. It has done so in this document.

Amita Joseph is an Advocate in the High Court of Delhi. She has had more than a decade's involvement with the NGOs. She is an active member of PUCL. □

Lupin Laboratories to launch first complete combi-pack for TB

Lupin Laboratories is all set to launch, for the first time in India, a combination pack containing all four drugs required for the treatment of tuberculosis, in line with WHO recommendations.

Each Strip of "AKT-4", as the product is called, contains two tablets of pyrazinamide, one rifampicin capsule and an ethambutol/isoniazid combination tablet. This is in accordance with the guidelines issued by the World Health Organisation (WHO) which recommends that all these four drugs be given to a patient in the first two months of treatment to minimise chances of developing drug resistance.

Lupin officials point out that the treatment for TB is divided into two phases the initial phase stretching over two months and the continuation phase which is spread over four to six months. Since the treatment is rather long-drawn (coupled with the need to take a combination of drugs at different stages) the rate of non-compliance is very high. In most cases patients discontinue the treatment after two months when the

symptoms disappear.

As a result by the time the relapse occurs, most patients develop drug resistance. In such cases, the treatment has to be started all over again with stronger and more expensive drugs like ethionamide, prothionamide and cycloserine. It will also involve carrying out a host of tests and re-working the therapy.

Resistance can be minimised to an extent by including ethambutol (or streptomycin injection) in the regimen for the first two months, says Mr. Manohar Arora, executive vice-president (pharma), Lupin. He points out that resistance development is one of the biggest problems in TB treatment today. Prevention of resistance is therefore of vital importance.

The only other combi-pack in the market, the "Zucox" kit (a Glaxo product) contains three anti-TB drugs. The WHO recommends combination of two (or three) drugs in the continuation phase.

The Lupin combi-pack (AKT-4) is priced at Rs. 14 per strip. In order to motivate the patient to comply with the prescribed regimen

throughout the period of treatment, the company has worked out a "patient benefit scheme." Under the scheme the patient gets a one rupee discount on purchase of every strip of AKT-4. Unlike in other discount schemes, the coupon is routed to the patient through the doctor who gives it along with the prescription.

With the emergence of HIV linked TB, the disease is no longer confined to the developing countries only. The WHO estimates that there are eight million new cases of TB every year. The TB bacterium kills 2.9 million people every year, probably more than any other single infectious pathogen. In fact, the WHO had last year termed TB a "global emergency". According to estimates of the Indian ministry of health 1.5 per cent of the Indian population (about nine million) suffers from radiologically active TB. It is also estimated that there are five lakh deaths in the country annually due to this disease while about the same number of persons are cured.

Source: Usha Subramanian, The Economic Times, Bombay, October 26, 1994.

UPDATE

Midwinter Spring

Vaclav Havel

There are good reasons for suggesting that the modern age has ended. Many things indicate that we are going through a transitional period, when it seems that something is on the way out and something else is painfully being born. It is as if something were crumbling and exhausting itself, while something else, still indistinct, arises from the rubble.

The distinguishing features of transitional periods are a mixing and blending of cultures and a plurality of parallelism of intellectual and spiritual worlds. These are periods when all consistent value systems collapse, when cultures distant in time and space are discovered and rediscovered.

Today, this state of mind, or of the human world, is called postmodernism. For me, a symbol of that state is a Bedouin mounted on a camel and clad in traditional robes under which he is wearing jeans, with a transistor radio in his hands and an ad for Coca-Cola on the camel's back. I am not ridiculing this nor am I shedding an intellectual tear over the commercial expansion of the West that destroys alien cultures. I see it as a typical expression of this multicultural era.

The dizzying development of science, with its unconditional faith in objective reality and complete dependence on general and rationally knowable laws, led to the birth of modern technological civilisation. It is the first civilisation that spans the entire globe and binds together all societies, submitting them to a common

global destiny. At the same time, the relationship to the world that modern science fostered and shaped appears to have exhausted its potential. The relationship is missing something.

Classical modern science described only the surface of things, a single dimension of reality. And the more dogmatically science treated it as the only dimension, as the very essence of reality, the more misleading it became. We may know immeasurably more about the universe than our ancestors did, and yet it increasingly seems that they knew something more essential about it than we do, something that escapes us. The same thing is true of nature as of ourselves.

Thus, we enjoy all the achievements of modern civilisation that have made our physical existence easier in so many important ways. Yet we do not know exactly what to do with ourselves, where to turn. We live in the postmodern world, where everything is possible and almost nothing is certain. This state of affairs has its social and political consequences. The planetary civilisation to which we all belong confronts us with global challenges. We stand helpless before them because our civilisation has globalised only the surface of our lives.

But our inner self continues to have a life of its own. And the fewer answers the era of rational knowledge provides to the basic questions of human beings, the more deeply it would seem that the

people cling to the ancient certainties of their tribe. Cultural conflicts are increasing and are more dangerous today than at any other time in history.

Politicians are rightly worried by the problem of finding the key to ensure the survival of a civilisation that is global and multicultural: how respected mechanisms of peaceful coexistence can be set up and on what set of principles they are to be established.

These questions have been highlighted with particular urgency by the two most important political events in the second half of the 20th century: the collapse of colonial hegemony and the fall of communism. The artificial world order of the past decades has collapsed and a new, more just order has not yet emerged. The central political task of the final years of this century then is the creation of a new model of coexistence among the various cultures, peoples, races and religious spheres within a single interconnected civilisation. Many believe that this can be accomplished through technical means - the invention of new organisational, political and diplomatic instruments.

Yes, it is clearly necessary to invent organisational structures appropriate to the multicultural age. But such efforts are doomed to failure if they do not grow out of something deeper. In searching for the most natural source for the creation of a new world order, we usually look to an area that is the traditional foundation of modern

justice and a great achievement of the modern age.

I am referring to respect for the unique human being and his or her liberties and inalienable rights, and the principle that all power derives from the people. I am referring to the fundamental ideas of modern democracy. Even these ideas are not enough. The very principle of inalienable human rights, conferred on man by the creator, grew out of the typically modern notion that man, as a being capable of knowing nature and the world, was the pinnacle of creation and lord of the world.

This modern anthropocentrism inevitably meant that he who allegedly endowed man with his inalienable rights began to disappear from the world. He was so far beyond the grasp of modern science that he was gradually pushed into a sphere of privacy of sorts, if not directly into a sphere of private fancy - that is, to a place where public obligations no longer apply. The existence of a higher authority than man himself simply began to get in the way of human aspirations.

The idea of human rights and freedoms must be an integral part of any meaningful world order. Yet I think it must be anchored in a different place, and in a different way, than has been the case so far. Paradoxically, inspiration for the renewal of this lost integrity can once again be found in science. In a science that is new — postmodern — and producing ideas

that in a certain sense allow it to transcend its own limits. I will give two examples.

The "anthropic cosmological principle" brings us to an idea, perhaps as old as humanity itself, that we are not at all just an accidental anomaly, the microscopic caprice of a tiny particle whirling in the endless depths of the universe. Instead, we are mysteriously connected to and mirrored in the universe, just as the entire evolution of the universe is mirrored in us.

The moment it begins to appear that we are deeply connected to the entire universe, science reaches the outer limits of its powers. With the "anthropic cosmological principle," science has found itself on the border between science and myth. In that, however, science has returned, in a roundabout way, to man, and offers him his lost integrity by anchoring him once more in the cosmos.

The second example is the "Gaia hypothesis." This theory brings together proof that the dense network of mutual interactions between the organic and the inorganic portions of the earth's surface form a single system, a kind of megaorganism, a living planet, Gaia, named after an ancient goddess recognisable as an archetype of the Earth Mother in perhaps all religions.

According to the Gaia hypothesis, we are parts of a greater whole. If we endanger Gaia, who will dispense with us in the

interests of a higher value - life itself.

What makes the "anthropic principle" and the "Gaia hypothesis" so inspiring? One simple thing: both remind us of what we have long suspected, of what we have long projected into out forgotten myths and what perhaps has always lain dormant within us as archetypes. That is, the awareness of being anchored in the earth and the universe, of being an integral part of higher, mysterious entities against whom it is not advisable to blaspheme. This forgotten awareness is encoded in all religions. Cultures anticipate it in various forms. It endows us with the capacity for self transcendence.

Politicians at international forums may reiterate a thousand times that the basis of the new world order must be universal respect of the miracle of being, of the universe, of nature, the miracle of our own existence. Only someone who submits to the authority of the universal order and of creation, who values the right to be a part of it and a participant in it, can genuinely value himself and his neighbours and thus honour their rights as well. The creation gave man the right to liberty. It seems man can realise that liberty only if he does not forget the one who endowed him with it.

Source: The Telegraph, Calcutta, 31.7.94, P.8. (The New York Times) □

Truth, purity and unselfishness, wherever these are present there is no power below or above the sun to crush the possessor thereof.

Equipped with these, one individual is able to face the whole universe in opposition.

Swami Vivekananda

KHOJ INITIATIVES

The Shivpuri Project

Asheena Khalak-Dina

Asheena Khalak-Dina was Programme Officer in VHAI. She was coordinating the work of Independent Commission on Health in India

The Shivpuri (M.P.) KHOJ project is run by SAMBHAV, an NGO located in Gwalior that handles other similar projects in nearby districts. The KHOJ office is in the town of Shivpuri and has a project staff of six (including two women), all of whom visit the twenty villages that the project covers. Of the twenty, seven villages are "intensive" and the remainder are "non-intensive." Contact with the former has been on-going for a year and a half, whereas with the latter it is more recent. The main aim of this

project, as it stands today, is to raise the awareness levels of the villagers about health issues, promote education and literacy, initiate income generating activities and provide them with minor curative and preventive health services. The project staff achieve this by holding group meetings and discussions with the men and women, separately, about twice a month in each "intensive" village.

Two "intensive" villages were visited (between 10-13 November 1994), namely Kathmai and Chandh, and one "non-intensive" village, Amar Khoya. In each of the villages we spoke with a group of the village women and occasionally with a few of the men. The dai and the VHW (identified and trained by KHOJ staff) in each village were the most informative in the intensive villages. We also met the District Collector, Mr. Amar Pal Singh, and the new ICDS supervisor. The Collector seemed interested in welcoming NGOs which were involved in development. We attended part of a literacy rally conducted by KHOJ staff in Sattan Baada, another block in Shivpuri district where KHOJ

had a second office, for raising the awareness of parents and the community about education and its benefits. On the final day we met with Dr. S.K. Singh and Dr. P.C. Bhatnagar in Gwalior to discuss the intricacies of conducting the project and its associated constraints.

Population Profile

In general, the Saharia adivasis make up a majority in the selected villages. They are extremely poor, spending all their wages on everyday subsistence. Both men and women leave the village to work while the children are left behind. Women gather groundnut or collect firewood to sell in the town during the winter and work in the quarries or wheat fields the remainder of the year, earning around Rs.20-25 per day. They also do all the housework. The men work year round in quarries and earn around Rs.40-45 per day. The staple diet consists of rotis and "mirchi ki sabzi," supplemented with other vegetables once in a while. There is a very serious problem of water shortage which precludes the villagers from farming their own land. Although water pumps exist in all villages, availability of water is not always guaranteed. As a result hygiene is often compromised; one child's eyes were so filthy and infested with flies that he could hardly see through them.

Health Status

All the children are malnourished as is clearly evidenced by their pot-bellied stomachs, and the women are visibly weak and anaemic. Almost all the women have some



Asheena Khalak-Dina



Asheena Khalak-Dina

gynaecological problem or the other; fertility rates are high (average 7), as is infant and child mortality. All the men smoke bidis and drink local liquor on a daily basis. **There is a high incidence of tuberculosis, especially amongst males, that can be attributed to quarry work, alcohol consumption, close living quarters and general malnutrition.**

The most distressing fact about health care in the district is that

the PHC doctor is hardly ever at the clinic because he has a private practice as well (legal in M.P.). The villagers usually go to private doctors whose fees are well beyond their means. Apparently the tribal people are treated very badly by doctors in general because of their low status in society, and often receive low standard or negligent health care.

The ANM visits each village about once a month to immunize the pregnant mothers and younger



children. She also talks to the women about sterilization ("operation" is a dreaded word among these women) and little else. When asked whether they would be willing to take birth control pills, the women were more enthusiastic, especially in the "non-intensive" village, where little groundwork had been accomplished by the project staff themselves. These women had never even heard of ORS (we spent a few minutes teaching them how to make a home solution).

The project as a whole seems to be in a very preliminary stage, especially in the 13 "non-intensive" villages. The project staff have varied experiences and backgrounds, and need to undergo much more training in their specific areas. Apparently there has been a lot of turnover of staff since the project's inception which weakens the impact of activities. There are some very significant constraints in working in these areas as well. For instance, project staff are difficult to recruit; the government programs and services (such as schools and clinics) are practically non-functional; social structures and massive exploitation prevent any equitable access for the adivasis; and lack of government control over law and order. On the other hand, the people are open and very willing to learn and improve their situation if given the chance, especially women. Their acceptance of the KHOJ project and rapport with the staff is a positive indicator.

**True development
consists in reducing
ourselves to a
cipher.**

Mahatma Gandhi

Consumer Talk

Mathew N. M.

Mathew N. M. is a Programme Officer in VHAJ. He is in the Campaign Unit.

India has a glorious tradition of health services dating back to many centuries. The Vaidyas and Hakims and other local healers were part and parcel of the social milieu. Their services were fully integrated into India's cultural heritage. They enjoyed an unquestionable position as men of wisdom and integrity. As they depended basically on local flora and other natural resources, the treatments were very cheap if not free. There was perhaps no active interplay of economic forces in these deals. Of course, there surely was an economic activity taking place as a service was offered by somebody and received by somebody else. The concept of consumer and producer, like in many other areas, was not at all defined. The relationship between the medicine man and the patient was considered very sacred. It was a non monetised relationship. The treatment and cure processes were more holistic in nature as the spiritual well-being and rehabilitation of the patient was as important as the physical recovery itself. Intuition and charisma of the healer played a major role.

The advent of the modern allopathic system of medical care signalled qualitative change which was very different from this age-old traditional approach. The impact of this new system on the indigenous systems was disastrous and is well documented in history. Modern medicines brought with it very different kind of ideas, structures, concepts and practices in medical care. The outlook was different, the methods were different and the training were

special. Medical care went into professional hands supported with scientific gadgets and laboratory facilities. The services were more organised and systematised. Medical Service began to be counted in terms of money. The cost of treatment went up as doctors charged consultation fees, medicines had to be purchased from the market, clinical investigations had to be conducted and, unlike in the past, patients had to be lifted to hospitals. All these involved money. In the past, the patient care was mostly the responsibility of the family members as the patient was kept at home when ill. This helped the patient to recover fast. But in the modern system of hospitalisation, the major responsibility of the patient care was taken up by the treating doctor, hospital and other staff. The results are not always very healthy and happy.

As the modern medical care system used business management techniques to run health services. It became imperative for doctors to acquire business skills over and above their medical capabilities. Health care became a business where service was provided for a fee. In other words, medical services and patient care facilities could be hired. The principle of consumer and service provider became very clear. Health care shops came up. When doctors found it difficult to manage things on their own, they employed professionals in business to assist them. Two issues cropped up - the business interests and patient care. The quality and essentiality were subjective and varied from one

situation to another in the absence of foolproof regulatory mechanisms or effective professional ethics.

The atmosphere suited the drug industry. Drugs were produced and marketed far in excess of the requirements, unrelated to the health needs of the people. Many of them hazardous, unnecessary and useless. The end result is that the hospital and medicine industry became a very powerful business identity nationally and internationally. It has become a money spinning venture, everywhere. Economic forces like demand and supply, competition, promotion, use of high technology, research and development etc., began to play a crucial role in the provision and distribution of health services and products. Decisions regarding programmes and their implementations were taken at the highest political and economic echelons. In the process what was neglected and lost was people's power to have a say in matters of their own life and health. People became recipients from the earlier position of partners and active participants. This cultural erosion alienated people from programmes many of which were vertically imposed on them. No wonder, these developments left people confused and mystified resulting in deterioration of health status and decline in health services. The shift was clear, evident and stark from holistic health care to compartmentalised health business.

The lack or absence of people's involvement was also due to extreme difficulty for people to get

necessary information from the medical services provided to them. This restricted people's choice of medical services. Sophistication or reification of the system coupled with the prevailing ignorance and poverty made the present day health services not people centred or patient friendly.

The Article 21 of the Indian Constitution guaranteed to every citizen of India the Right to Life and Property. The Constitution also mandated under Article 47 (Directive Principles) a duty on the State to raise the level of nutrition and standard of living of its citizens and also to improve their public health. In pursuance of these objectives Government set up the public health care system in the country. This service was basically free and open to all the people. Whether or how these obligations have been handled is a matter for separate discussion.

The Constitution also provided the liberty for the citizens to practice any profession of their choice. Thus the medical profession became a prominent walk of life for many. Patients in need of their help sought their services and paid them for it. Charitable health care centres also grew up simultaneously. In any case there was the element of giving something and taking something as a remuneration. It is generally accepted that when a person accepts goods or services by making payment, he is called a consumer.

Consumer Protection Act (CPA), 1986 affirmed this concept in its definition of consumer. It stated that a consumer is a person who buys goods or services for a 'consideration', i.e., money which has been paid partly or fully or promised. The definition of service provided in the Act in Section 2 (o) was service of any description which is made available to potential users excluding rendering of any service free of charge or under a contract of personal service.

Now the most important question whether medical services can be considered as a service under scope and meaning of this Act so as to qualify the patient as a consumer. The problem is not so much with the nomenclature, but in its implications. If the patient is a consumer his/her legal rights are legally protected and so it has to be respected. And the ramifications are obvious. As no payment was involved in Government medical services, CPA could not adjudicate over this sector. But the Act brought the services of the private health sector in its ambit as there was hiring of service for payment.

This opened up the Pandora's box. Doctor's associations like Indian Medical Association, the Medical Practitioners Association and others raised their objections and started a campaign to claim exemption from this Law. In April 1992 the National Consumer Disputes Redressal Commission ruled that under the jurisdiction of the Consumer Protection Act, 1986 patients are consumers, medical service is a service and services rendered by hospitals do not bring them within the exempted category of service under 'contract of personal service'. Of course this verdict stands challenged in the Supreme Court (SC), so also some of the contradicting judgments of High Courts, besides appeals filed for and against by consumer activists and other interest parties. The SC conducted one hearing on this matter in September, 1994.

We consider patients as health consumers. They have some inalienable rights, firstly as human beings and secondly as consumers of health services. The right to self

determination, privacy of their bodies, right to choice, safety, education and information and above all the right to get redressal in case of injustice, can never be compromised. These are the very basics of human existence in a civilised society. However, it is also important to understand these rights in proper perspective so that they do not infringe upon the rights of those who provide the service. Patient is not a commodity for business gains. Consumer satisfaction should be the central theme in medical care. After all, we are dealing with human beings, with sensitivities and sensibilities, not robots.

"Every human being of adult years and sound mind has a right to determine what shall be done with his own body..." (Justice Cardozo of the United States Supreme Court.)

Here is a poster, addressed to the patients, available from VHAI. □

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TB Returns To Developed Nations

"Imagine a sports stadium filled to capacity with 50,000 people. That's how many people die from tuberculosis each week. Their deaths could be prevented, since an effective cure is available which costs them less than the price of one stadium ticket."

This is an extract from a report prepared by the World Health Organisation (WHO) in 1994. WHO had last year declared tuberculosis a global emergency.

After a long time the focus in developed countries is once again on a disease which was thought to have been wiped out completely. The WHO report, however, points out that although TB was eliminated from affluent nations it had remained in developing countries killing millions of people.

Most nations in Europe and North America have been busy with other crises, the report says. Now TB is returning to developed countries with a vengeance in a new deadlier form. Its return is closely linked to the HIV epidemic and the neglect of TB control programmes.

Take, for instance, the US. The number of TB cases there had been declining at the rate of six per cent till 1985. Since then, however, it has actually been climbing. In New York city, TB cases have virtually doubled, and estimates show that around 15 million

people in the US have been infected by TB.

What is bothering the health authorities is the emergence of particularly potent strains of the TB bacterium which are resistant to two or more anti-TB drugs.

Contributing to this development in a large measure, say Indian experts, is the fact that TB treatment stretches over eight to nine months, which not only renders it cumbersome but also prohibitively expensive (around Rs.1,500 per patient for a short course chemotherapy) for a large chunk of the population in developing nations.

Although the three (or four) drugs for TB treatment are made available in state government run TB clinics in India free of cost, the long period of treatment coupled with the fact that symptoms disappear in about two months, leads to a high rate of non-compliance to the treatment schedule. It is in such cases, experts point out, that a relapse occurs and the bacterium resurges in more virulent and drug-resistant forms.

WHO warns against such inadequate or incomplete treatment. It points out that such programmes serve as a breeding ground for multi-drug resistant TB. "As these drug-resistant strains spread, TB threatens to become an incurable disease for future generations," it says.

A joint evaluation of the TB programme in India by the Centre, WHO and SIDA revealed that it was necessary to shift emphasis from monitoring, detection and treatment to monitoring the number of cases cured in order to achieve effective control of the disease.

According to government statistics, to reduce the burden of the disease in India in the medium term, it is estimated that about 10 lakh sputum positive cases need to be treated and cured each year. The cost of drugs alone, for such a programme, would amount to around Rs. 150 crore. Added to this would be the cost of strengthening organisational structures at all levels.

Although the central plan outlay has been enhanced to Rs.35 crore in 1993-94 and is expected to be raised to Rs. 50 crore for 1994-95, it is still woefully insufficient. The health ministry has, therefore, proposed that World Bank assistance be obtained for a TB control project based on short course chemotherapy for sputum positive cases. Under this programme, pilot projects have been initiated in Gujarat, Delhi and Bombay. It is to be gradually extended to five states and six cities. *Source: The Economic Times, Bombay, November 6, 1994.*

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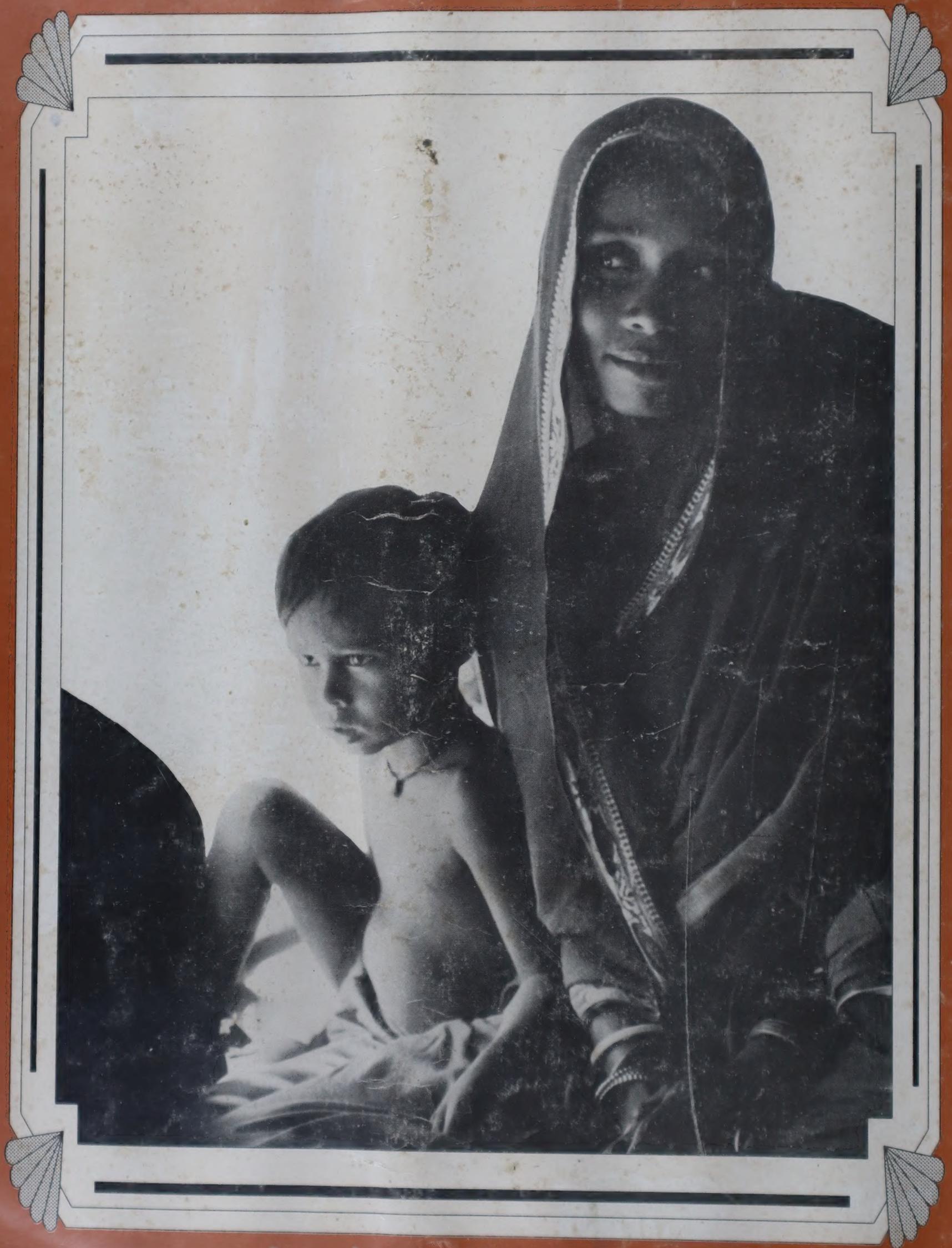
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